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A Taxonomic Study on the Japanese Species of the Genus *Coryphium* (Coleoptera, Staphylinidae)

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Abstract The Japanese species of the genus *Coryphium* are dealt with. *Boreaphilus nikkoensis* K. SAWADA is transferred to this genus. All the Japanese species, including five new speices, are either described or redescribed and a key to them is given. The new species are: *C. miyamorii* from Hokkaido and Kantô to Tôhoku Districts, *C. tateoi* from Kinki District, *C. fuscum* from Chûgoku District, *C. iwakisanense* from Tôhoku District, and *C. yasutoshii* from Kantô and Shin'etsu Districts.

The genus *Coryphium* is one of the relatively small groups of the subfamily Omaliinae, which are characterized by the presence of a pair of ocelli on the vertexal region of head. *Coryphium* is characterized by the shape of maxillary palpi, of which the penultimate segment is strongly dilated and the apicalmost extremely small.

The members of this genus are widely distributed in the Holarctic Region and mainly dwell in moss or under dead leaves in mountain forests. Up to the present, two species, *C. japonicum* YOSHIDA et NOMURA and *C. coriaceoides* (Y. SHIBATA), have been reported from Japan. However, the former should belong to the genus *Philydrodes* as already pointed out by UÉNO and WATANABE (1966, p. 321). Thus, *C. coriaceoides* is the only species of the genus recorded with certainty from the Japanese Islands.

Pursuing the taxonomic revision of the subfamily Omaliinae from Japan, the author has found five new species of *Coryphium* which will be described in this paper. On the other hand, the peculiar species, *Boreaphilus nikkoensis* K. SAWADA, does not agree with the generic characteristics of *Boreaphilus*, but has all the diagnostic features of *Coryphium*. It is therefore transferred to the latter genus.

Before going further, the author wishes to express his hearty thanks to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for his kind advice on the present study, and to Dr. J. M. CAMBELL of the Biosystematics Research Institute Agriculture Canada, Ottawa, and Dr. L. ZERCHE of the Institut für Pflanzenschutzforschung der Akademie der Landwirtschafts-Wissenschaften der DDR, for their kindness in giving the author useful specimens distributed in the Holarctic Region. Deep gratitude is also due to Messrs. T. ITO, T. KIKUCHI, K. MIYAMORI, K. TANAKA and Y. SHIBATA, for their kind assistance in providing with materials used in the present study.

Genus *Coryphium* STEPHENS

Coryphium STEPHENS, 1834, Illustr. Brit. Ent., **5**: 344.
Harpognathus WASMAEL, 1834, Rec. Enc. Belg., **1**: 119.
Macropalpus CUSSAE, 1852, Annls. Soc. ent. Fr., (2), **10**: 613.
Polychelus LUZE, 1904, Hor. Soc. ent. ross., **37**: 74.
Occiephelinus HATCH, 1957, Beetl. Pacif. Northwest, **2**: 75.
Planeboreaphilus SHIBATA, 1970, Ent. Rev. Japan, **22**: 58.
Other references are omitted.

Body parallel-sided and somewhat depressed above, closely covered with pale-yellowish pubescence. Head suborbicular or subquadrate, depressed in anterior half and gently convex in posterior half; postocular area arcuate and a little shorter than the longitudinal diameter of each eye, which is rather prominent; ocelli distinct, the distance between them being larger than that from the outside of ocellus to the inner margin of each eye; median part behind smooth frontal area provided on each side with a fovea or impression; gular sutures narrowly separated and divergent posteriad. Antennae moderately elongate, not reaching the middle of elytra, slightly thickened towards the apical segment, which is the longest. Labrum strongly transverse and slightly narrowed anteriad, anterior margin shallowly emarginate at the middle, provided with a number of short setae throughout its width, and also with two long setae at each latero-anterior side. Mandibles slender and strongly curved inwards in apical half, molar area obscure; each mandible armed with a remarkable tooth near the middle of inner margin. Maxillae relatively narrow; galea slightly narrowed

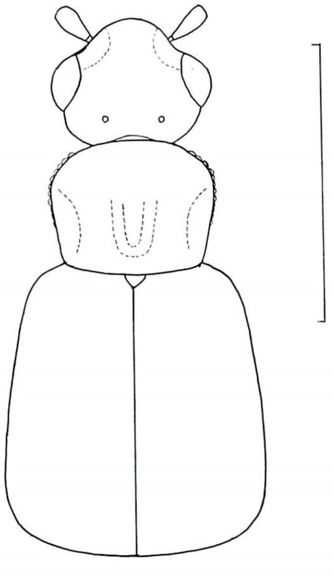
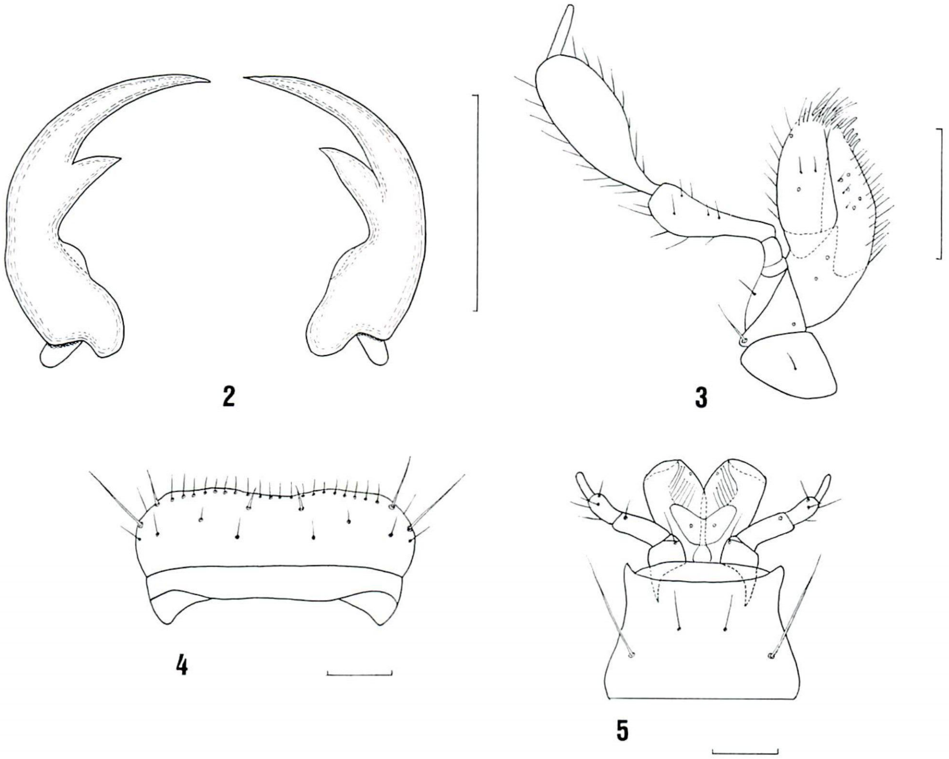


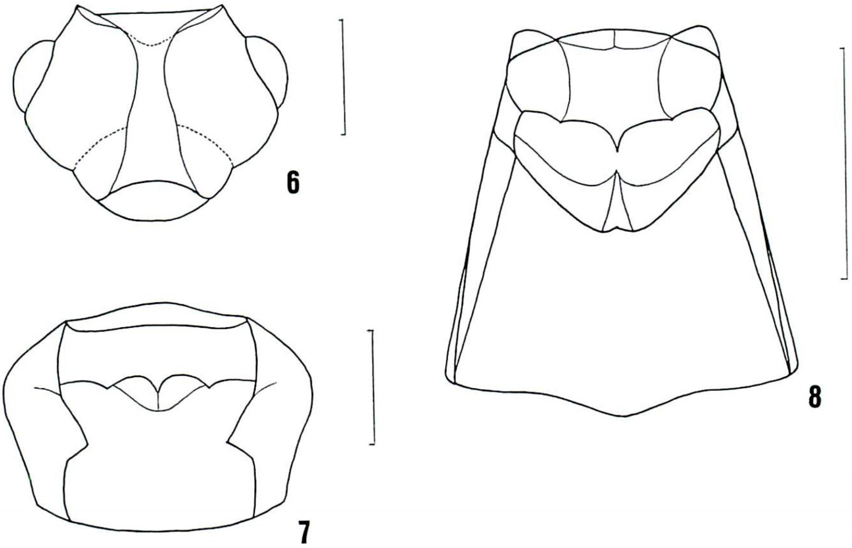
Fig. 1. Head, pronotum and elytra of *Coryphium angusticolle* STEPHENS. Scale: 1.0 mm



Figs. 2–5. Mouthparts of *Coryphium angusticolle* STEPHENS. —— 2, Mandibles; 3, maxilla; 4, labrum; 5, labium. Scale: 0.25 mm (2), 0.2 mm (3), 0.1 mm (4 & 5).

towards the apex, which is closely fringed with short bristles, and also sparsely with similar bristles on outer margin; lacinia convergent apicad, inner margin rather densely fringed with fine bristles and with four or so spines on apical part; maxillary palpi four-segmented, basal segment short, 2nd evidently dilated apicad and slightly incurved, more than 2.5 times as long as width, 3rd conspicuously widened towards the apex, nearly 2.5 times as long as broad and about 1.5 times as long as 2nd, apicalmost subulate, much shorter and slenderer than 3rd. Mentum transverse and narrowed anteriad, lateral sides distinctly constricted at anterior third, and divergent both anteriad and posteriad; ligula membranous, deeply notched at the middle of anterior margin and forming two lobes; labial palpi three-segmented, 1st segment the longest and twice as long as broad, 2nd a little longer than broad though evidently shorter than 1st, apicalmost elongate, more than twice as long as broad but slightly shorter and much narrower than 2nd.

Pronotum moderately convex and transverse; lateral margins obsoletely crenulate in anterior half, though the crenulation is obscure in some species; prosternal plate strongly transverse, prosternal process short and subtriangular, acutely pointed at



Figs. 6–8. Ventral aspects of head and thorax of *Coryphium angusticolle* STEPHENS. —— 6, Head, 7, prothorax; 8, meso- and methathoraces. Scale: 0.25 mm (6 & 7), 0.5 mm (8).

the apex, procoxal cavities open behind. Mesosternal plate transverse and provided with a longitudinal carina at each side of the middle; mesosternal process longer than prosternal process and sharply pointed at the apex, mesocoxal cavities contiguous. Metasternal plate large, gently produced backwards at the middle of posterior margin, metacoxal cavities contiguous. Scutellum subtriangular and relatively small, surface almost glabrous. Elytra somewhat flattened and dilated posteriad. Abdomen parallel-sided except for apical three visible segments which are abruptly convergent towards apical end, basal visible sternite distinctly carinate at the middle of base. Legs moderately long; procoxae prolonged and subcylindrical, meso- and metacoxae subtriangular, profemur more or less stout, mesofemur somewhat longer than profemur; metafemur longer than mesofemur; all the tibiae slender and somwehat thickened apicad; tarsi five-segmented and relatively long, nearly two-thirds as long as respective tibia, apical segment of metatarsus long, but slightly shorter than three preceding segments together.

Male genital organ trilobed and moderately sclerotized.

Type species: *Coryphium angusticolle* STEPHENS.

Key to the Japanese Species of *Coryphium*

1(12) Pronotum distinctly punctured and not coriaceous.
2(11) Antennae and legs yellowish brown.
3 (8) Head subquadrate, postocular area broadly angulate before neck; median

lobe of male genital organ as long as parameres.

4 (7) Head not coriaceous in frontal area; postocular area shorter than the longitudinal diameter of each eye.

5 (6) Pronotum rather densely and coarsely punctured, median lobe of male genital organ not upturned at the apex ...... *C. miyamorii* Y. WATANABE, sp. nov.

6 (5) Pronotum rather sparingly and moderately coarsely punctured; median lobe of male genital organ distinctly upturned at the apex ....*C. tateoi* Y. WATANABE, sp. nov.

7 (4) Head finely coriaceous in frontal area; postocular area equal in length to the longitudinal diameter of each eye ....*C. fuscum* Y. WATANABE, sp. nov.

8 (3) Head suborbicular, postocular area evenly convergent towards neck; median lobe of male genital organ shorter than parameres.

9(10) Elytra twice as long as pronotum; median lobe of male genital organ symmetrical .... *C. iwakisanense* Y. WATANABE, sp. nov.

10(9) Elytra less than twice as long as pronotum; median lobe of male genital organ slightly asymmetrical .... *C. nikkoense* (K. SAWADA).

11(2) Antennae dark reddish brown; legs blackish except for reddish tarsi .... *C. yasutoshii* Y. WATANABE, sp. nov.

12(1) Pronotum impunctate but distinctly coriaceous .... *C. coriaceoides* (Y. SHIBATA).

Coryphium miyamorii Y. WATANABE, sp. nov.

(Figs. 9–12)

Body length: 2.6–3.2 mm (from front margin of head to anal end).

Body nearly parallel-sided and somewhat depressed above, closely covered with pale-yellowish pubescence. Colour reddish black to dark reddish brown and moderately shining, with antennae reddish brown, mouth parts and legs yellowish brown.

Head subquadrate and somewhat depressed in anterior half and elevated in posterior half, a little broader across compound eyes than long (width/length=1.15); postocular area broadly angulate before neck and a little shorter than the longitudinal diameter of each eye, which is somewhat prominent; frontal area between antennal tubercles almost impunctate and smooth, with a distinct depression on each side of the middle just behind the smooth portion; surface moderately closely covered with rather strong punctures; ocelli distinct, the distance between them being much larger than that from the outside of ocellus to the inner margin of each eye. Antennae relatively short and slightly thickened towards apical segment, not reaching the middle of elytra, 1st segment robust and about 1.5 times as long as broad, 2nd longer than broad (length/width=1.40) but shorter (2nd/1st=0.77) and narrower (2nd/1st=0.83) than 1st, 3rd somewhat dilated apicad, nearly twice as long as broad and a little longer than 2nd (3rd/2nd=1.15), 4th to 10th subequal in length to one another, each seg-

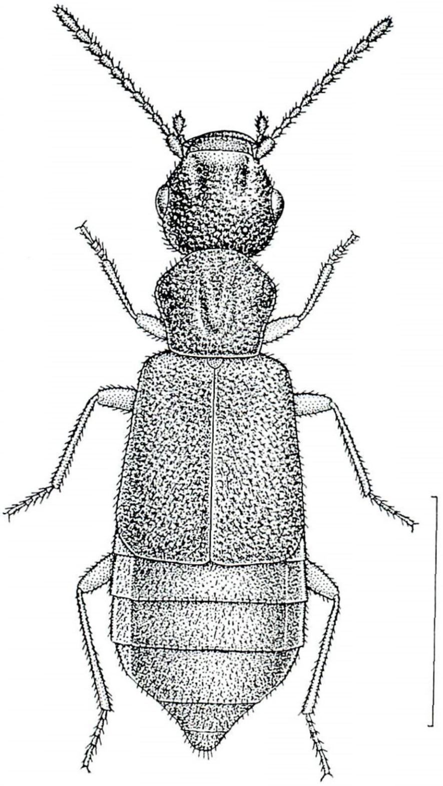
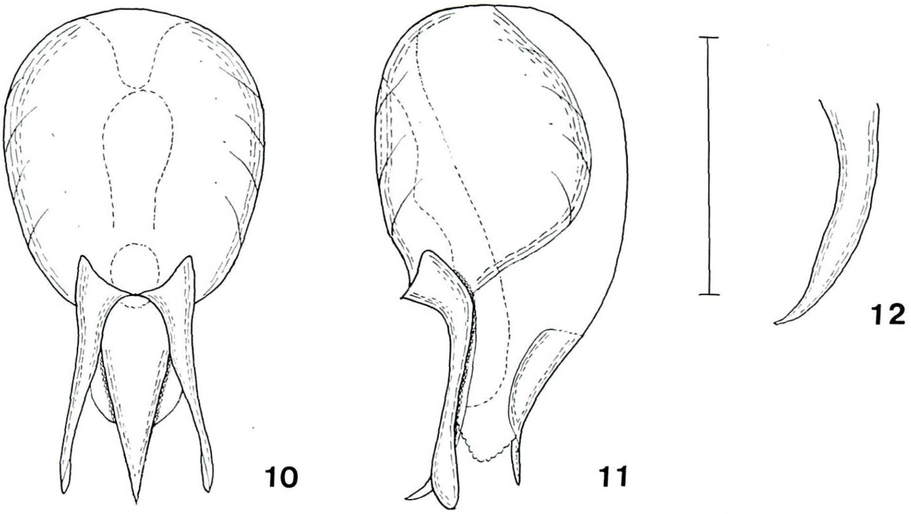


Fig. 9. *Coryphium miyamorii* Y. WATANABE, sp. nov., from Kitayuzawa in southern Hokkaido. Scale: 1.0 mm.

ment a little longer than broad, apicalmost elongate, much longer than broad (length/width=2.26) and twice as long as 10th, narrowly rounded at the tip.

Pronotum convex and subhexagonal, slightly transverse (width/length=1.03), a little narrower than head (pronotum/head=0.87), widest at anterior third and markedly narrowed both anteriad and posteriad; lateral margins finely bordered, anterior half arcuate and very obsoletely crenulate, posterior half somewhat emarginate and not crenulate, posterior margin slightly rounded and finely bordered like lateral margins; anterior angles rounded though not visible from above, posterior ones bluntly angulate; surface more densely and much more coarsely punctured than on head, and provided with a shallow depression at the internal side of each lateral margin in posterior half and also with a U-shaped depression at the middle in posterior half. Scutellum small and subtriangular, surface almost glabrous. Elytra somewhat dilated posteriad and rather flattened above, a little longer than broad (length/width=1.07), much longer than (elytra/pronotum=1.75), and more than 1.5 times as broad as, pronotum; lateral sides almost straight, posterior margin truncate, posterior angles broadly rounded; surface densely covered with coarse punctures.

Abdomen nearly parallel-sided in three basal visible segments and abruptly



Figs. 10–12. Male genital organ of *Coryphium miyamorii* Y. WATANABE, sp. nov. —— 10, Ventral view; 11, lateral view; 12, oblique ventral view of the apical part of median lobe. Scale: 0.4 mm (10 & 11), 0.2 mm (12).

convergent posteriad in three apical ones; surface of each tergite surperficially and rather sparingly punctured, and covered with extremely fine coriaceous ground sculpture; preapical sternite in male shallowly and semicircularly emarginate at the middle of posterior margin. Legs relatively slender, protarsi slightly widened in male, last segment of metatarsus slightly shorter than three preceding segments together.

Male genital organ trilobed and symmetrical. Median lobe, viewed ventrally, strongly convergent towards acutely pointed apex, and apical part distinctly curving ventrally in profile, ventral surface smooth; parameres elongate, slightly shorter than median lobe and a little thickened at apical part as seen from lateral side.

Type series. Holotype: ♂, Horobetsu-kôzan, Iburi, Hokkaido, Japan, 4. VII. 1985, K. MIYAMORI leg.; allotype: ♀, Kita-yuzawa, Iburi, Hokkaido, Japan, 19. VI. 1983, Y. WATANABE leg. Paratypes: 2 ♂♂, 1 ♀, same data as the holotype; 1 ♂, 1 ♀, Tonkeshi Riv., Iburi, Hokkaido, Japan, 15. VI. 1985, K. MIYAMORI leg.; 1 ♂, 2 ♀♀, Mt. Muroran-dake, Iburi, Hokkaido, Japan, 23. VI. 1985, K. MIYAMORI leg.; 1 ♂, 2 ♀♀, Lake Kuttara-ko, Iburi, Hokkaido, Japan, 22. VI. 1969, K. MIYAMORI leg.; 2 ♀♀, Funami-chô, Muroran, Hokkaido, Japan, 4. XI. 1987, K. MIYAMORI leg.; 13 ♂♂, 5 ♀♀, same data as the allotype; 1 ♂, Sarobetsu-gawa, Yakumo, Hokkaido, Japan, 16. VI. 1974, K. MIYAMORI leg.; 3 ♂♂, 2 ♀♀, near Miike-goya, Hinoemata, Fukushima Pref., Honshu, Japan, 27. VIII. 1966, Y. WATANABE leg.; 1 ♂, 3 ♀♀, Kirizumi, Gunma Pref., Honshu, Japan, 25. V. 1962, Y. SHIBATA leg.; 1 ♂, Kamikôchi, Nagano Pref., Honshu, Japan, 14. VIII. 1981, Y. WATANABE leg.

The type specimens are deposited in the collection of the Laboratory of Entomology, Tokyo University of Agriculture, except for some paratypes to be preserved in the British Museum (Natural History) (two pairs from Kita-yuzawa) and in SHIBATA's private collection (1 ♂, 3 ♀♀ from Kirizumi).

Distribution. Japan (Hokkaido, Honshu).

The specific name is dedicated to Mr. Ken'ichi MIYAMORI, who collected many specimens of the type series and kindly collaborated with the author in searching for this new species at Kita-yuzawa.

Coryphium tateoi Y. WATANABE, sp. nov.

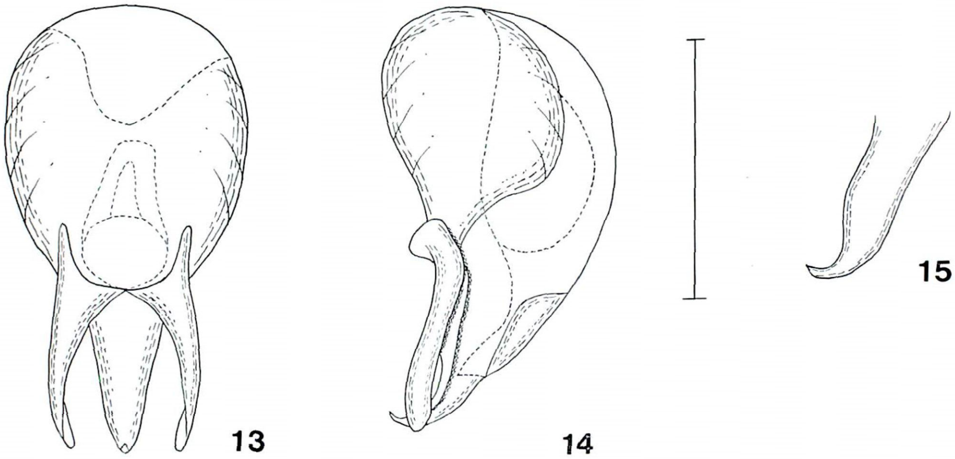
(Figs. 13–15)

Body length: 3.1 mm (from front margin of head to anal end).

Similar to *C. miyamorii* in general appearance and body size, but can be distinguished from it by the following points:

Body narrower and more darkened in colour; head more strongly convergent posteriad and more coarsely punctured on the surface than in *C. miyamorii*; pronotum relatively short, nearly as long as head and more distinctly transverse (width/length = 1.21), more strongly narrowed posteriad, lateral sides not crenulate for its whole length, surface more sparingly and less coarsely punctured; elytra less dilated posteriad, distinctly longer than broad (length/width = 1.12) and much longer than pronotum (elytra/pronotum = 1.90), surface less densely and more coarsely punctured.

Male genital organ also generally similar to that of *C. miyamorii*, but different from it in the following details: median lobe broader and less strongly convergent



Figs. 13–15. Male genital organ of *Coryphium tateoi* Y. WATANABE, sp. nov. —— 13, Ventral view; 14, lateral view; 15, oblique ventral view of the apical part of median lobe. Scale: 0.4 mm (13 & 14), 0.2 mm (15).

towards the apex, which is distinctly upturned; parameres as long as median lobe and stouter than those of *C. miyamorii*.

Holotype: ♂, Tônomine, Yamato, Nara Pref., Honshu, Japan, 15. VI. 1986, T. ITO leg. Preserved in the collection of the Laboratory of Tokyo University of Agriculture.

Distribution. Japan (Honshu).

This new species is named after Mr. Tateo ITO, who collected this interesting specimen.

Coryphium fuscum Y. WATANABE, sp. nov.

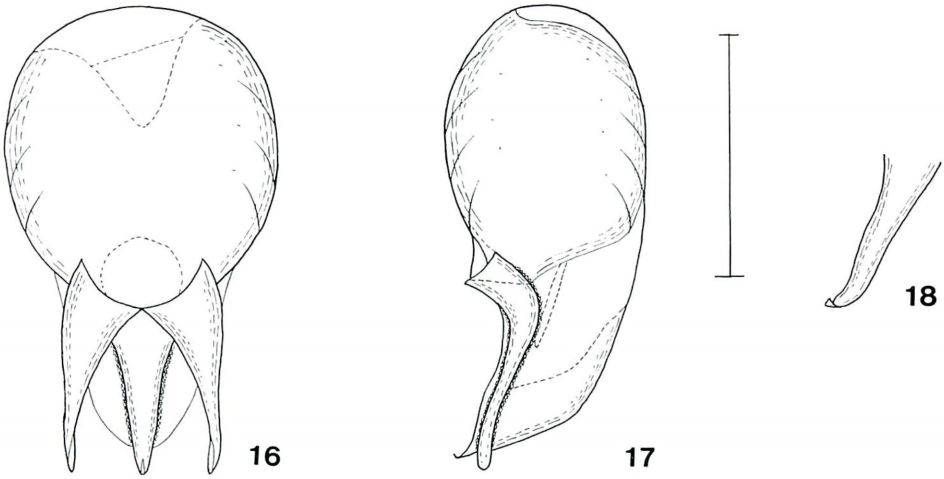
(Figs. 16–18)

Body length: 3.3 mm (from front margin of head to anal end).

Allied to the two preceding species, but can be distinguished from them by the following points:

Head covered with fine coriaceous ground sculpture in frontal area, postocular area relatively long and almost as long as the longitudinal diameter of each eye; pronotum similar in shape to that of *C. miyamorii*, though the lateral margins are not crenulate as in *C. tateoi*, surface coarsely but not rugosely punctured; elytra more densely and more coarsely punctured than in *C. miyamorii*.

Male genital organ similar to that of *C. tateoi* in the shape of median lobe, but differing from it in the following points: median lobe, viewed ventrally, much narrower and more strongly convergent towards apex, which is acutely pointed and more strongly upturned.



Figs. 16–18. Male genital organ of *Coryphium fuscum* Y. WATANABE, sp. nov. —— 16, Ventral view; 17, lateral view; 18, oblique ventral view of the apical part of median lobe. Scale: 0.4 mm (16 & 17), 0.2 mm (18).

Holotype: ♂, Azami-ga-take, Kanochô, Yamaguchi Pref., Honshu, Japan, 25. V. 1975, K. TANAKA leg. Deposited in the Laboratory of Entomology, Tokyo University of Agriculture.

Distribution. Japan (western Honshu).

Coryphium iwakisanense Y. WATANABE, sp. nov.

(Figs. 19–21)

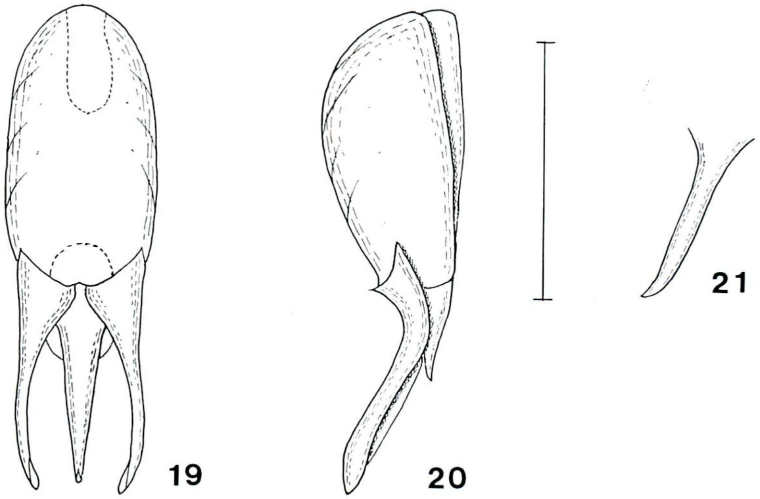
Body length: 2.9 mm (from front margin of head to anal end).

The present new species resembles the three preceding ones, but differs from them in the shape of head and in the structure of male genital organ.

Body nearly parallel-sided and somewhat depressed above, closely covered with pale-yellowish pubescence. Colour blackish brown and moderately shining, with antennae, mouth parts and legs yellowish brown, elytra somewhat lighter in the sutural areas.

Head suborbicular, somewhat depressed in anterior half and gently convex in posterior half, a little broader across compound eyes than long (width/length=1.29); postocular area almost evenly convergent towards neck and slightly shorter than the longitudinal diameter of each eye, which is somewhat prominent; frontal area almost impunctate and rather deeply depressed just inside each antennal tubercle; surface rather sparingly covered with somewhat coarse punctures, and provided with a large depression on each side of the middle just behind the smooth frontal area; ocelli distinct, the distance between them being much larger than that from the outside of ocellus to the inner margin of each eye. Antennae slightly thickened towards the extremities, relatively short and not reaching the middle of elytra, 1st segment robust and about 1.5 times as long as broad, 2nd a little longer than broad (length/width=1.22) but much shorter (2nd/1st=0.61) and somewhat narrower (2nd/1st=0.75) than 1st, 3rd nearly 1.5 times as long as broad and a little longer than 2nd (3rd/2nd=1.12), 4th to 10th subequal in length to one another, each segment somewhat longer than broad, apicalmost elongate, about 2.5 times as long as broad and more than twice as long as 10th, narrowly rounded at the tip.

Pronotum subhexagonal and convex, slightly transverse (width/length=1.03) and somewhat narrower than head (pronotum/head=0.89), widest at anterior third and markedly narrowed both anteriad and posteriad; each lateral margin finely bordered, the border continuing onto slightly arcuate posterior margin, distinctly arcuate in anterior half but gently emarginate in posterior half; anterior angles rounded though not visible from above, posterior ones narrowly rounded; surface more closely and more coarsely punctured than on head, and provided with a shallow depression at the inner side of each lateral margin in posterior half and with a U-shaped shallow depression surrounding a short longitudinal median elevation. Scutellum small and subtriangular, glabrous on surface. Elytra somewhat dilated posteriad and flattened



Figs. 19–21. Male genital organ of *Coryphium iwakisanense* Y. Watanabe, sp. nov. —— 19, Ventral view; 20, lateral view; 21, oblique ventral view of the apical part of median lobe. Scale: 0.4 mm (19 & 20), 0.2 mm (21).

above, a little longer than broad (length/width=1.13) and twice as long as, and more than 1.5 times as broad as, pronotum; lateral sides almost straight, posterior angles broadly rounded; surface densely covered with somewhat coarse punctures.

Abdomen nearly parallel-sided, except for three apical visible segments which are abruptly convergent towards the apical end; surface of each tergite sparingly, superficially and finely punctured, and covered with extremely fine coriaceous ground sculpture; preapical sternite in male shallowly and semicircularly emarginate at the middle of posterior margin, the preceding sternite shallowly and semicircularly depressed at the middle in front of posterior margin, surface of the depression more closely pubescent than on other parts. Legs moderately elongate, protarsi slightly widened in male, last segment of metatarsus a little shorter than three preceding segments together.

Male genital organ trilobed and moderately sclerotized. Median lobe, viewed ventrally, almost symmetrical and relatively narrow, distinctly convergent towards acutely pointed and upturned apex; parameres elongate, almost as long as median lobe and somewhat thickened at apical part.

Holotype: ♂, Mt. Iwakisan, Aomori Pref., Honshu, Japan, 18. VIII. 1960, T. Kikuchi leg. Preserved in the collection of the Laboratory of Entomology, Tokyo University of Agriculture.

Distribution. Japan (northeastern Honshu).

Coryphium nikkoense (K. SAWADA), comb. nov.

(Figs. 22–24)

Boreaphilus nikkoensis K. SAWADA, 1964, Ent. Rev. Japan, **16**: 36. —— SHIBATA, 1974, Annual Bull. Nichidai Sanko, (17): 8; 1976, ibid., (19): 126.

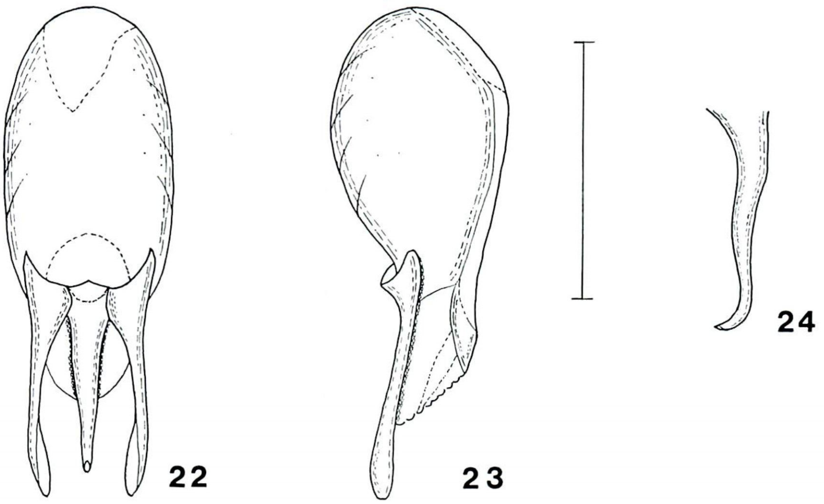
Body length: 2.9–3.3 mm (from front margin of head to anal end).

Somewhat resembles *C. iwakisanense*, but can be distinguished from it by the more robust body, shorter elytra and the different male genital organ.

Body nearly parallel-sided and rather depressed above, closely covered with pale-yellowish pubescence. Colour reddish black to dark reddish brown and moderately shining, with antennae reddish brown, mouth parts and legs yellowish brown.

Head suborbicular, somewhat depressed in anterior half and gently elevated in posterior half, clearly broader across compound eyes than long (width/length=1.23); postocular area arcuate and a little shorter than the longitudinal diameter of each eye, which is somewhat prominent; frons between antennal tubercles almost impunctate and smooth; surface rather densely covered with coarse punctures, and provided with a depression on each side of the middle in anterior third; ocelli distinct, the distance between them being much larger than that from the outside of each ocellus to the inner margin of each eye. Antennae relatively short and not reaching the middle of elytra, 1st segment robust and more than 1.5 times as long as broad, 2nd a little longer than broad (length/width=1.33) but much shorter (2nd/1st=0.57) and a little narrower (2nd/1st=0.75) than 1st, 3rd somewhat dilated apicad, twice as long as broad and 1.5 times as long as 2nd, 4th to 10th subequal in length to one another, each segment twice as long as broad, apicalmost the longest, much longer than broad (length/width=2.75) and about 2.5 times as long as 10th, narrowly rounded at the tip.

Pronotum subhexagonal and moderately convex above, somewhat transverse (width/length=1.10) and slightly narrower than head (pronotum/head=0.92), widest at anterior third and strongly narrowed both anteriad and posteriad; lateral margins finely bordered, arcuate and obsoletely crenulate in anterior half, gently emarginate and not crenulate in posterior half, posterior margin slightly rounded and finely bordered like lateral margins; anterior angles rounded though not visible from above, posterior ones bluntly angulate; surface rather uneven, provided with a shallow lateral depression at the inner side of each lateral margin in posterior two-thirds, a short longitudinal ante-median depression in anterior half and a U-shaped postmedian depression surrounding a small smooth shining plaque, and moderately densely covered with somewhat rugose punctures. Scutellum relatively small and subtriangular, with surface almost impunctate. Elytra somewhat dilated posteriad and rather flattened above, a little longer than broad (length/width=1.06) and much longer (elytra/pronotum=1.81) and much broader (elytra/pronotum=1.56) than pronotum; lateral sides almost straight, posterior angles broadly rounded; surface closely covered with coarse punctures.



Figs. 22–24. Male genital organ of *Coryphium nikkoense* (K. SAWADA). —— 22, Ventral view; 23, lateral view; 24; oblique ventral view of the apical part of median lobe. Scale: 0.4 mm (22 & 23), 0.2 mm (24).

Abdomen nearly parallel-sided in four basal visible segments and abruptly convergent posteriad in three apical ones; surface of each tergite covered with extremely fine coriaceous ground sculpture, and sparsely scattered with fine superficial punctures; preapical sternite in male semicircularly emarginate at the middle of posterior margin, the preceding sternite subtriangularly depressed at the middle in front of posterior margin, surface of the depression being impunctate and glabrous, and each side of the glabrous area somewhat elevated and provided with a small tuft of fine pubescence. Legs relatively slender, protarsi slightly widened in male, last segment of metatarsus a little shorter than three preceding segments together.

Male genital organ closely similar in general appearance to that of *C. iwakisanense*, but slightly differing from it in the following points: median lobe slightly asymmetrical and more slender; parameres distinctly longer than median lobe.

Specimens examined. 2 ♂♂, Mt. Gassan, Yamagata Pref., Honshu, Japan, 30. VIII. 1963, Y. SHIBATA leg.; 5 ♂♂, 2 ♀♀, near Marunuma, Oku-Nikkô, Gunma Pref., Honshu, Japan, 2. VII. 1962, Y. WATANABE leg.; 1 ♂, Mt. Sampuku-tôge, S. Jpn. Alps, Honshu, Japan, 10. VII. 1979, Y. WATANABE leg.; 6 ♂♂, Shimashima Valley, Nagano Pref., Honshu, Japan, 10. VI. 1966, Y. WATANABE leg.; 1 ♂, Hirakura, Mie Pref., Honshu, Japan, 21. VI. 1961, Y. WATANABE leg.

Distribution. Japan (Honshu).

Coryphium yasutoshii Y. WATANABE, sp. nov.

(Figs. 25–28)

Body length: 3.5–3.7 mm (from front margin of head to anal end).

The present new species can be easily distinguished from the other Japanese species by the following combination of characters: body and legs really blackish, except for yellowish brown tarsi, pronotum distinctly punctured and median lobe of male genital organ remarkably elongate.

Body subparallel-sided and somewhat depressed above, closely covered with pale-yellowish pubscence. Colour blackish, with mouth parts and antennae dark reddish brown, all the tarsi yellowish brown.

Head suborbicular and convex behind, a little broader across compound eyes than long (width/length=1.20); postocular area arcuate and a little shorter than the longitudinal diameter of each eye, which is somewhat prominent; frontal area between antennal tubercles subtriangularly elevated, surface of the elevation im-

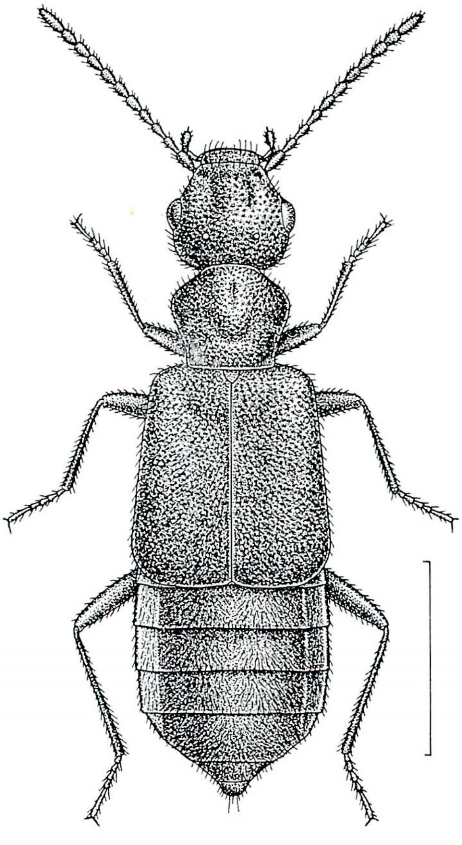


Fig. 25. *Coryphium yasutoshii* Y. WATANABE, sp. nov., from Mt. Jôshû-Hotaka in central Honshu. Scale: 1.0 mm.

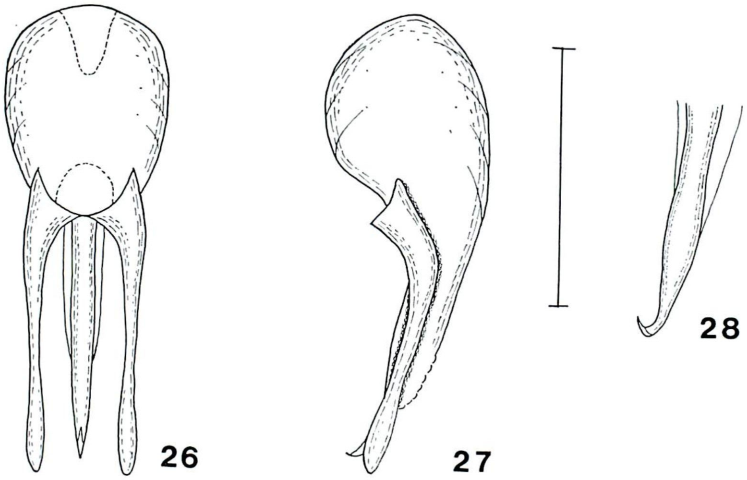
punctate in anterior half and provided with a few setiferous punctures in posterior half; surface moderately closely, rather coarsely punctured and covered with coriaceous ground sculpture in anterior half, and provided with a large depression on each side of the middle in anterior half; ocelli distinct, the distance between them being much larger than that from the outside of ocellus to the inner margin of each eye. Antennae elongate but not reaching the middle of elytra, 1st segment robust and a little longer than broad (length/width=1.36), 2nd about 1.5 times as long as broad though distinctly shorter than 1st (2nd/1st=0.79), 3rd elongate, more than twice as long as broad and a little longer than 2nd (3rd/2nd=1.27), 4th to 6th subequal in length to one another, each segment about 1.4 times as long as broad, 7th to 10th subequal in length to one another, each a little longer than 6th and more than 1.5 times as long as broad, apicalmost the longest, much longer than broad (length/width=2.91) and more than 1.5 times as long as 10th.

Pronotum subhexagonal and convex, somewhat broader than long (width/length=1.08) but slightly narrower than head (pronotum/head=0.93), widest just before the middle and more strongly narrowed anteriad than posteriad; lateral margins finely bordered, arcuate in anterior two-thirds and feebly emarginate in posterior third, posterior margin slightly rounded and bordered like lateral margins; anterior angles rounded though not visible from above, posterior ones bluntly angulate; surface more closely and more coarsely punctured than on head, and provided with a short longitudinal depression at the middle in anterior third, a shallow depression at the inner side of each lateral margin in posterior half and a U-shaped depression at the middle in posterior half. Scutellum subtriangular, glabrous on surface. Elytra somewhat dilated posteriad and rather flattened above, a little longer than broad (length/width=1.13), twice as long as and much broader than pronotum (elytra/pronotum=1.72); lateral sides almost straight, posterior margin truncate, posterior angles broadly rounded; surface subopaque, densely covered with coarse punctures.

Abdomen nearly parallel-sided, except for apical three visible segments which are abruptly convergent towards the apical end; surface of each tergite sparingly, finely and superficially punctured, and covered with extremely fine coriaceous ground sculpture; preapical sternite in male shallowly and semicircularly emarginate at the middle of posterior margin, the preceding sternite subtriangularly flattened at the middle in front of posterior margin. Legs moderately slender, protarsi slightly widened in male.

Male genital organ trilobed and symmetrical. Median lobe elongate, almost parallel-sided in basal half and slightly narrowed in posterior half towards apex, which is sharply pointed and strongly upturned. Parameres somewhat longer than median lobe, each paramere rather thickened in apical fourth.

Type series. Holotype: ♂, near Edozawa, Mt. Jôshû-Hotaka, Gunma Pref., Honshu, Japan, 14. VIII. 1980, Y. SHIBATA leg. Allotype: ♀, Shimashima Valley, Nagano Pref., Honshu, Japan, 10. VII. 1966, Y. WATANABE leg. Paratype: 1 ♀, Hakuba Village, Nagano Pref., Honshu, Japan, 5. VII. 1966, Y. WATANABE leg. All



Figs. 26–28. Male genital organ of *Coryphium yasutoshii* Y. WATANABE, sp. nov. —— 26, Ventral view; 27, lateral view; 28, oblique ventral view of the apical part of median lobe. Scale: 0.4 mm (26 & 27), 0.2 mm (28).

the type specimens are preserved in the collection of the Laboratory of Entomology, Tokyo University of Agriculture.

Distribution. Japan (central Honshu).

The specific name of this new species is dedicated to Mr. Yasutoshi SHIBATA, who collected the holotype.

Coryphium coriaceoides (Y. SHIBATA)

(Figs. 29–31)

Planeboreaphilus coriaceoides SHIBATA, 1970, Ent. Rev. Japan, **22**: 59, figs. 1–2, pl. 5, figs. A–F.; 1974, Annual Bull. Nichidai Sanko, (17): 23.

Coryphium coriaceoides: CAMBELL, 1978, Mem. ent. Soc. Canada, (106): 27.

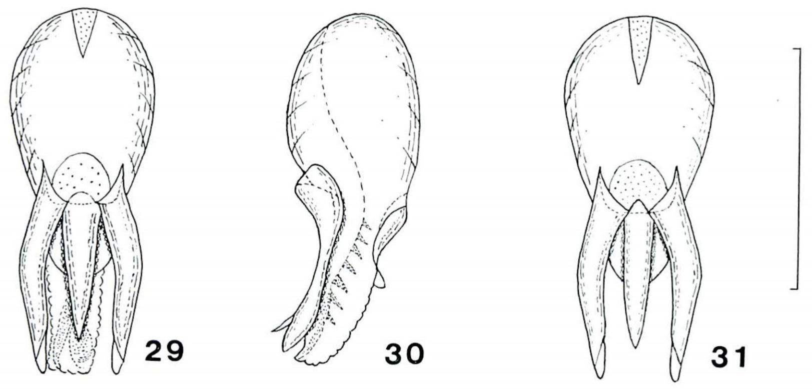
Body length: 2.7–2.8 mm (from front margin of head to anal end).

This species remarkably differs from the other Japanese species in the configuration of pronotum, which is subtrapezoidal and impunctate on the surface, though covered with strong coriaceous ground sculpture.

Body parallel-sided and somewhat depressed above, closely covered with pale-yellowish pubescence. Colour blackish and subopaque, with mouth parts, antennae and legs, except for yellowish brown tarsi, reddish black.

Head subtrapezoidal, narrowed anteriad, somewhat depressed above in anterior half, though gently elevated in posterior half, remarkably broader across compound eyes than long (width/length=1.50); postocular area short, about one-fourth as long as the longitudinal diameter of each eye and rather abruptly constricted posteriorly; frontal area between antennal tubercles transversely flattened, the flat area being impunctate and shining; surface rather sparingly, minutely, superficially punctured and covered with distinct coriaceous ground sculpture, and provided with a feveoid depression on each side of the middle in anterior third; ocelli distinct, the distance between them more than 2.5 times as long as that from the outside of ocellus to the inner margin of each eye. Antennae relatively short, not reaching the middle of elytra and hardly thickened towards the extremities, 1st segment robust and evidently longer than broad (length/width=1.6), 2nd about 1.5 times as long as broad but a little shorter than 1st (2nd/1st=0.75), 3rd elongate, about twice as long as broad and a little longer than 2nd (3rd/2nd=1.17), 4th to 6th subequal in length to one another, each segment somewhat longer than broad, 7th to 10th subequal in length to one another, each segment slightly longer than broad, apicalmost the longest, more than twice as long as broad and nearly twice as long as 10th, subacuminately pointed at apex.

Pronotum subtrapezoidal, narrowed posteriad and gently convex, widest at about anterior third and gently rounded and contracted anteriad, though abruptly narrowed posteriad; lateral margins finely bordered, arcuate in anterior half and slightly emarginate or straight in posterior half, posterior margin finely bordered like lateral margins and slightly rounded; anterior angles broadly rounded and visible from above, posterior angles narrowly rounded; surface impunctate, though strongly coriaceous all over, and provided with a U-shaped obsolete depression at the middle in posterior half, and sometimes with a small depression in front of the U-shaped depression and also with a shallow depression at the inner side of each lateral margin in posterior half. Scutellum subtriangular, with glabrous surface. Elytra dilated posteriad and somewhat flattened above, as long as or slightly longer than broad, much longer (elytra/pronotum=1.70) and much broader (elytra/pronotum=1.55) than pronotum,



Figs. 29–31. Male genital organ of *Coryphium coriaceoides* (Y. SHIBATA), from central Honshu (29 & 30) and southern Hokkaido (31). —— 29, 31, Ventral views; 30, lateral view. Scale: 0.4 mm.

lateral margins straight, posterior margin truncate; surface densely covered with coarse punctures.

Abdomen flat and nearly parallel-sided, except for two apical visible segments which are abruptly convergent towards the apical end; surface of each tergite rather sparingly, superficially, finely punctured and covered with coriaceous ground sculpture. Legs moderately elongate, protarsi slightly widened in male.

Male genital organ trilobed and almost symmetrical. Median lobe elongate, gradually convergent towards apex, which is acutely pointed and not upturned; parameres rather stout and considerably longer than median lobe, each paramere curving inwardly in apical half.

Specimens examined. 7 ♂♂, 8 ♀♀, Mareppu Riv., Iburi, Hokkaido, Japan, 29. VI. 1965, K. MIYAMORI leg.; 4 ♂♂, 6 ♀♀, same locality and collector as above, 13. VI. 1985; 5 ♂♂, 3 ♀♀, Horobetsu-kôzan, Iburi, Hokkaido, Japan, 4. VII. 1985, K. MIYAMORI leg.; 1 ♂, 3 ♀♀, Tonkeshi Riv., Iburi, Hokkaido, Japan, 4. VII. 1985, K. MIYAMORI leg.; 6 ♂♂, 1 ♀, Mt. Senjô-ga-take, S. Jpn. Alps, Honshu, Japan, 13. VII. 1979, Y. WATANABE leg.; 1 ♂, 1 ♀, Hirogawara, S. Jpn. Alps, Honshu, Japan, 26. VIII. 1969, Y. SHIBATA leg.

Distribution. Japan (Hokkaido, central Honshu).

Notes. The specimens obtained in Hokkaido slightly differs from southern ones in the shape of the median lobe of male genital organ, but the difference can be regarded as infraspecific variation.

摘　　要

渡辺泰明: 日本産 *Coryphium* 属の分類学的研究. —— 日本産 *Coryphium* 属の分類学的検討を行ない, *Boreaphilus nikkoensis* K. SAWADA を本属に含めると同時に, 既知種の *C. coriaceoides* (Y. SHIBATA) および今回記載した下記の5新種を含めた日本産種の検索表を与え, それら各種の雄交尾器を図示した.

C. miyamorii は *C. nikkoense* (K. SAWADA) に似ているが, 頭部はより角ばって四角形を呈し, 前胸背板の点刻は皺状にならず, 雄交尾器中葉は幅広く, 末端に向かって顕著に狭まる, などの点で区別できる.

C. tateoi は *C. miyamorii* に似ているが, 頭部はより強く後方に狭まり, より粗く点刻され, 前胸背板はより幅広く, 側縁は平滑で, より疎に点刻される. また, 雄交尾器の形状も異なる, などの点で区別できる.

C. fuscum は上記2新種に似ているが, 前頭域は明らかな微細構造におおわれ, 側頭部が複眼の長径とほぼ等しく, 雄交尾器中葉がやや細く, 末端が強く上反する, などの点で区別できる.

C. iwakisanense は外観が上記3新種に似ているが, 頭部はほぼ円形を呈し, 側頭部は頸部に向かって一様に狭まり, 雄交尾器中葉は幅狭く, 側葉よりわずかに短かい, などの点で区別できる.

C. yasutoshii は, 体と付節を除いた脚が黒色を呈し, 雄交尾器中葉がいちじるしく細長い点において, 他の日本産種とは際だって異なり, きわめて容易に区別することができる.

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Elytra, Tokyo, **16** (2): 64, November 15, 1988

オオイチモンジシマゲンゴロウの越冬場所について

松本英明・礒﨑年光

Hideaki MATSUMOTO & Toshimitsu ISOZAKI: A Hibernating Site of *Hydaticus pacificus* AUBÉ (Coleoptera, Dytiscidae)

オオイチモンジシマゲンゴロウ *Hydaticus pacificus* AUBÉ は，日本から東南アジア，インドなどにかけて分布する，多くは止水性の水生甲虫で，日本では本州，琉球に分布し，本州産は別亜種 *conspersus* RÉGINBART として区別されている．

一時期，本州では絶滅が危惧されていたが，最近，埼玉県北本市（阿部・笹井，1986），茨城県笠間市（桜井　浩・疋田直之，1987）など，関東各地から採集例や記録が知られるようになった．しかし，採集場所の環境や採集時の状況についての報告がほとんどなく，本州における本種の詳しい生息場所はよくわかっていなかった．ところが最近になって，茨城県桂村における本種の越冬例が報告され，その姿が美しいカラー写真となって公表された（今井，1988）．

筆者らも，埼玉県において，成虫の越冬地と思われる場所から1例を確認することができたので，本種の生息場所のひとつとして報告しておく．

1♀，埼玉県比企郡鳩山町（標高 60–70 m），5–IV–1988，礒﨑年光・赤塚　博採集．

当地は，埼玉県のほぼ中央に位置する岩殿丘陵の一角で，おおむねアカマツ，コナラの混交林でおおわれ，丘陵にはいくつもの狭い谷地が貫入している．確認場所は，この丘陵谷底部の最奥部（谷頭）で，落葉におおわれた水深 0–数 cm の泥湿地である．本個体は，トウキョウサンショウウオの観察中に，多くの卵嚢に混じって見いだされたものであるが，偶然得られた個体なので，落葉下に潜んでいたのか，泥中なのかなどの詳細は不明である．また，ゲンゴロウ類と両生類の卵嚢とになんらかの関係があるのかどうかもよくわからないが，筆者らの北海道での観察では，メススジゲンゴロウをエゾアカガエルの卵嚢の間隙から（5月），ゲンゴロウモドキをエゾサンショウウオの卵嚢とともに（4–6 月）見いだしたことがある．

この泥湿地は水塊をともなわず，摂食活動などの点から通年の生息場所となりうるのかどうかは不明であるが，おそらく活動盛期に向かって，増水による流出や飛翔移動により分散するものと推察される．谷地の下部は，水田放棄地，ヨシ草地，用水池，水田となっているので，これらの水域のいくつかを利用するものと思われる．

埼玉県にかぎらず関東地方の丘陵地帯には，同様の谷地（谷津田）が多く存在し，詳細に調査を進めることにより，今後，確認地は増えるものと推測される．

末文ながら，諸々の面でお世話になった赤塚 博，稲川 良両氏に深くお礼を申し上げる．

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Elytra, Tokyo, **16** (2): 65–71, November 15, 1988

Studies on the Subfamily Steninae (Coleoptera, Oxyporidae) from Japan

VIII. Subgenus *Parastenus* of the Genus *Stenus* LATREILLE, Part 3*

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Abstract A key to the Japanese species of the subgenus *Parastenus* is presented. Male genitalia of *Stenus koinobori* HROMÁDKA, 1980, and *S. hirtellus* SHARP, 1874, are described and figured for the first time.

Stenus koinobori HROMÁDKA

(Fig. 2 G–H)

Stenus koinobori HROMÁDKA, 1980, Z. Arbeitsgem. Österr. Ent., **31**: 115.

Description of male. Seventh sternum flat along the median line in full length, with a very shallow emargination at posterior margin; 8th sternum with a medium-sized emargination at posterior margin; 9th sternum with a broad and shallow emargination. Genitalia (Fig. 2 G) elongate-oval, median lobe curved ventrally and sharply pointed at apex, apical part modified also with an anterodorsal projection and an anterodorsal transverse ridge before the projection in lateral view (Fig. 2 H), apical margin of median lobe round, with a small projection at the middle in dorsal view; parameres extending a little beyond apex of median lobe, slightly curved inward, with a few hairs at apices.

Specimens examined. 13 exs., Mt. Kariba, Shiribeshi, Hokkaido, 12–14. vi. 1986, S. NOMURA leg.

Distribution. Japan (Hokkaido).

Remarks. The male of this species is first discovered from Japan.

Stenus hirtellus SHARP

(Fig. 1 A, D–E)

Stenus hirtellus SHARP, 1874, Trans. ent. Soc. Lond., **1874**: 86.

Description of male. Habitus as in Fig. 1 A; 8th sternum with a broad and shallow emargination at posterior margin; 9th sternum with a shallow emargination at posterior margin. Genitalia (Fig. 1 D) with median lobe acutely pointed; parameres extending almost to apex of median lobe, weakly swollen at apical parts, sparsely haired on apico-internal parts.

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* Contribution from the Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka (Ser. 3, No. 247).

Specimens examined. 1 male, Ryûmon Valley, Saga Pref., 23. x. 1977, H. OHISHI leg.; 1 female, Mt. Unzen, Shimabara, Nagasaki Pref., 27. ix. 1977, S. IMASAKA leg.

Distribution. Japan (Kyushu).

Remarks. This species was classified in the subgenus *Hypostenus* by BERNHAUER and SCHUBERT (1911), but is regarded as a member of the subgenus *Parastenus* because of its strongly sclerotized spermatheca (Fig. 1 E).

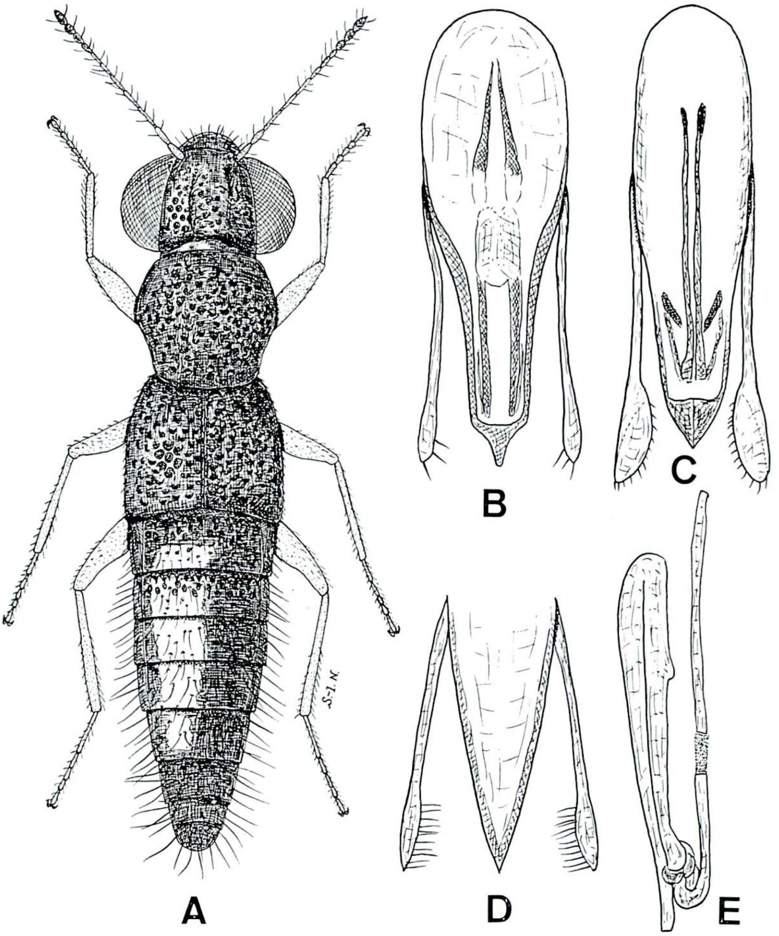

Fig. 1. A, D–E, *Stenus hirtellus* SHARP; B, *S. gestroi takara* NAKANE; C, *S. rugipennis* SHARP. —— A, Habitus; B–C, male genitalia in dorsal view; D, apex of male genitalia in dorsal view; E, spermatheca in female.

This very rare species is interesting in having the following characters: 1) 4th tarsomeres simple, 2) paratergites of abdomen absent, and 3) abdomen very shiny, with long, erect and sparse hairs. As the conditions share with the other two species, *Stenus cirrus* BENICK, 1940, and *S. cirriformis* NAOMI, 1988, these three apparently constitute a monophyletic group.

Stenus indubius SHARP

(Fig. 2 B–C)

Stenus indubius SHARP, 1889, Annls. Mag. nat. Hist., (6), **3**: 330.

Specimens examined. 1 ex., Mt. Saiho, Fukui Pref., 29–31. v. 1976, H. SASAJI leg.; 1 ex., Shimouchinami, Fukui Pref., 9. vi. 1974, H. SASAJI leg.; 1 ex., Mt. Kyôgatake, Fukui Pref., 26. vii. 1978, H. SASAJI leg.; 2 exs., Mt. Ohtô, Wakayama Pref., 28–29. vi. 1981, S. NAOMI leg.; 2 exs., Mt. Gomanodan, Wakayama Pref., 22–23. vi. 1981, S. NAOMI leg.; 2 exs., Mt. Ishizuchi, Ehime Pref., 16. vi. 1981, S. NAOMI leg.; 1 ex., Hakozaki, Fukuoka C., Fukuoka Pref., 12. v. 1979, K. YAMAGISHI leg.; 2 exs., Yunohara, Saga Pref., 20. v. 1979, C. OHKUMA leg.; 1 ex., Mt. Tara, Saga Pref., 15. iv. 1984, S. NOMURA leg.; 1 ex., Kinsengi, Mt. Tara, Nagasaki Pref., 7. v. 1983, S. NOMURA leg.; 2 exs., Mt. Tsubaki, Saga Pref., 2. x. 1977, H. OHISHI leg.; 1 ex., Mt. Seburi, Fukuoka Pref., 6. x. 1983, H. HARADA leg.; 2 exs., same locality, 3. x. 1976, H. OHISHI leg.; 2 exs., Ikenohara Marsh, Saga Pref., 9. ix. 1976, H. OHISHI leg.

Distribution. Japan (Honshu, Shikoku, Kyushu).

Remarks. In the *indubius* group (sensu HROMÁDKA, 1979 a), *Stenus indubius* SHARP itself is most widespread and common. There are some variations as to the following characters. The interocular area is almost impunctate and shiny in general, but is sparsely punctate in some specimens. The parameres of the male genitalia extend to a little before the apex of the median lobe in the specimen from Kobe (HROMÁDKA, 1979 a, fig. 1), but they extend just to and a little beyond the apex of the median lobe in the specimens from Fukui (Fig. 2 B) and from Saga (Fig. 2 C), respectively.

Key to the Species of the Subgenus *Parastenus* of Japan

This key is given for all the 29 Japanese species of the subgenus *Parastenus*. Keys to some species of *Parastenus* given by PUTHZ (1968) and HROMÁDKA (1979 a) are referred.

1 (34) Abdomen without paratergite in 5th to 7th segments.
2 (9) Abdomen with erect, long and sparse hairs.
3 (6) Fourth tarsomeres simple.
4 (5) Body larger (4.2–4.5 mm); antennae reaching posterior 1/4 of pronotum; median lobe of male genitalia broader; spermatheca robuster in female .... *S. cirriformis* NAOMI.

5 (4) Body (Fig. 1 A) smaller (3.0–3.2 mm); antennae reaching posterior 2/3 of pronotum; median lobe of male genitalia narrower (Fig. 1 D); spermatheca slenderer in female (Fig. 1 E).............. *S. hirtellus* SHARP.

6 (3) Fourth tarsomeres bilobed.

7 (8) Interocular area with a median smooth space broader and very shiny; pronotum and elytra with sparser punctures.......... *S. amamiensis* NAOMI.

8 (7) Interocular area with a median smooth space narrower and moderately shiny; pronotum and elytra with denser punctures.... *S. punctifer* NAOMI.

9 (2) Abdomen with decumbent and short pubescence or almost glabrous.

10 (11) Head deeply concave between eyes; elytra bicolorous, blackish with a pair of ill-defined reddish markings.......... *S. guttalis ishigakiensis* NAOMI.

11 (10) Head shallowly concave between eyes; elytra concolorous, dark reddish black to black.

12 (13) Body smaller (2.8–3.1 mm) and broader............ *S. hagoromo* NAOMI.

13 (12) Body larger (more than 3.5 mm) and narrower.

14 (15) Head narrower than elytra (male unknown).......... *S. fugu* HROMÁDKA.

15 (14) Head as broad as or broader than elytra.

16 (21) Eighth sternum with a broader and deeper emargination at posterior margin in male.

17 (18) Body with bluish shimmer; parameres of male genitalia extending just to apex of median lobe (HROMÁDKA, 1979 a, fig. 15).. *S. unagi* HROMÁDKA.

18 (17) Body without bluish shimmer; parameres of male genitalia extending a little beyond apex of median lobe.

19 (20) Interstices between punctures distinctly sculptured on abdomen; median lobe of male genitalia narrower (HROMÁDKA, 1979 a, fig. 20)... *S. ookami* HROMÁDKA.

20 (19) Interstices between punctures indistinctly sculptured on abdomen; median lobe of male genitalia broader (Fig. 2 A)........ *S. sakana* HROMÁDKA.

21 (16) Eighth sternum with a narrower and shallower emargination at posterior margin in male.

22 (27) Median lobe of male genitalia slenderer, narrowed in posterior half.

23 (24) Pronotum broader than long; median lobe of male genitalia strongly narrowed apically in posterior half (HROMÁDKA, 1979 a, fig. 17)... *S. tanuki* HROMÁDKA.

24 (23) Pronotum longer than broad; median lobe of male genitalia gently narrowed apically in posterior half.

25 (26) Head with a round smooth space between eyes in general; median lobe of male genitalia weakly pointed at apex (Fig. 2 B: Fukui, 2 C: Saga).. *S. indubius* SHARP.

26 (25) Head almost uniformly covered with sparse punctures; median lobe of male genitalia gently rounded at apex.................... *S. takane* NAOMI.

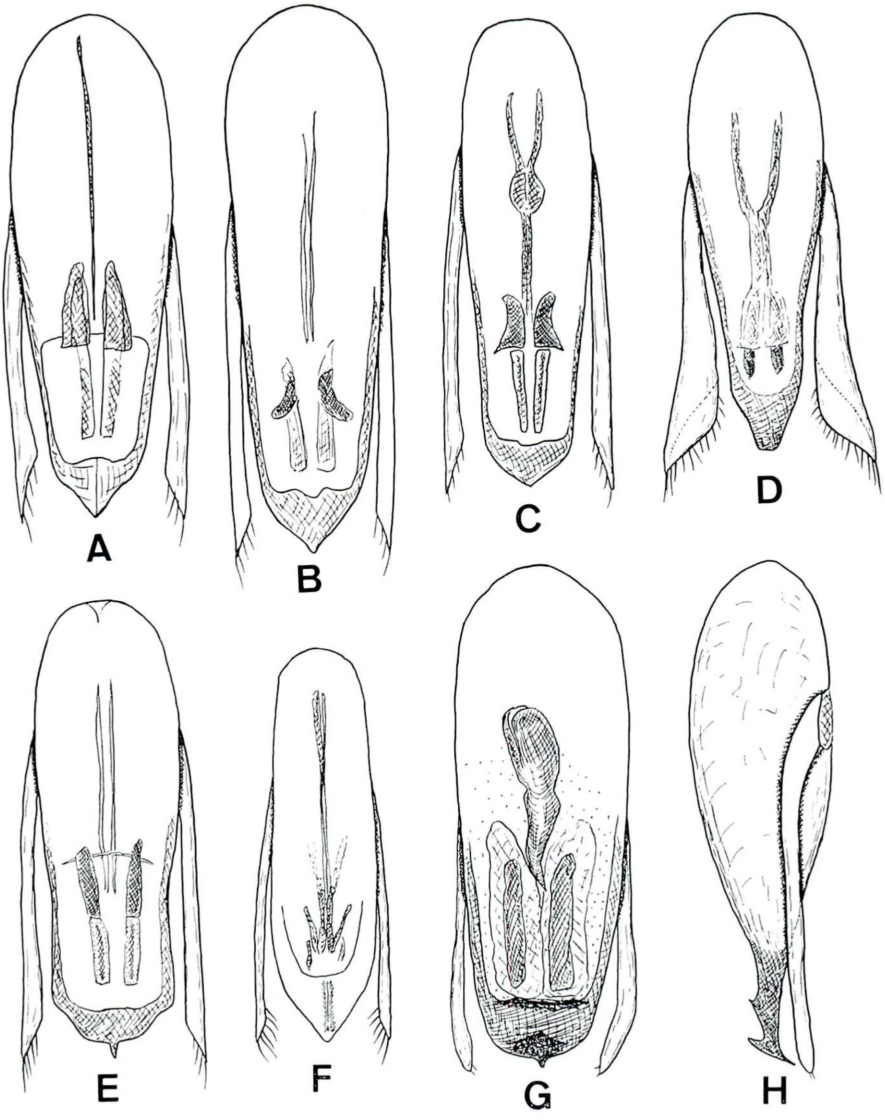

Fig. 2. A, *Stenus sakana* Hromádka; B–C, *S. indubius* Sharp; D, *S. coronatus zipanguensis* Puthz; E, *S. sawadai* Hromádka; F, *S. sharpi* Bernhauer et Schubert; G–H, *S. koinobori* Hromádka. A–G, Male genitalia in dorsal view; H, male genitalia in lateral view.

27 (22) Median lobe of male genitalia robuster, subparallel-sided in posterior half.

28 (31) Pronotum and elytra with dense, round and large punctures; antennae reaching posterior margin of pronotum.

29 (30) Median lobe of male genitalia rounded with a shorter median projection at apical margin.......................................*S. ohishii* Naomi.

30 (29) Median lobe of male genitalia sinuate with a longer median projection at apical margin (Fig. 2 E)...................... *S. sawadai* HROMÁDKA.

31 (28) Pronotum and elytra with dense and subrugose punctures; antennae not reaching posterior margin of pronotum.

32 (33) Median lobe of male genitalia with an acicular projection at apicomedian part; parameres extending to apex of the projection.... *S. kasumi* NAOMI.

33 (32) Median lobe of male genitalia with a small triangular projection at apicomedian part; parameres extending beyond apex of the projection... *S. kumoma* NAOMI.

34 (1) Abdomen with paratergites in each of 5th to 7th segments.

35 (38) Abdomen with long hairs.

36 (37) Elytra broader; abdomen with finer and sparser punctures; male genitalia with median lobe acutely pointed, parameres broader, with denser hairs at apices (HROMÁDKA, 1979 b, fig. 1)........ *S. sawadaianus* HROMÁDKA.

37 (36) Elytra narrower; abdomen with larger and denser punctures; male genitalia with median lobe obtusely pointed, parameres narrower, with sparser hairs at apices (HROMÁDKA, 1979 b, fig. 7)...... *S. domburi* HROMÁDKA.

38 (35) Abdomen with short hairs or almost glabrous.

39 (44) Elytra bicolorous, blackish with a pair of reddish markings.

40 (41) Head broader than elytra, deeply concave between eyes; parameres of male genitalia thinner (Fig. 1 B).................. *S. gestroi takara* NAKANE.

41 (40) Head narrower than or almost as broad as elytra, moderately concave between eyes; parameres of male genitalia thicker.

42 (43) Pronotum and elytra rugosely punctate; median lobe of male genitalia narrowed apically (Fig. 2 D)............ *S. coronatus zipanguensis* PUTHZ.

43 (42) Pronotum and elytra with round and dense punctures; median lobe of male genitalia swollen in apical half (PUTHZ, 1968, fig. 10).... *S. bicolon* SHARP.

44 (39) Elytra concolorous, yellowish brown or blackish.

45 (48) Body longer than 3.7 mm.

46 (47) Body larger (5.0–6.0 mm); head broader than elytra, with a median elevated and smooth space between eyes; parameres of male genitalia extending almost to apex of median lobe, truncate at apico-internal parts (Fig. 2 F)................................ *S. sharpi* BERNHAUER et SCHUBERT.

47 (46) Body smaller (3.7–4.5 mm); head a little narrower than elytra, without a smooth space between eyes; parameres of male genitalia extending beyond apex of median lobe, swollen at apical parts (Fig. 1 C)...*S. rugipennis* SHARP.

48 (45) Body shorter than 3.3 mm.

49 (52) Body narrower and more convex in both sexes; pronotum and elytra blackish.

50 (51) Elytra about as long as pronotum; median lobe of male genitalia almost truncate and shallowly bi-emarginate at apical margin.... *S. satsuki* NAOMI.

51 (50) Elytra shorter than pronotum; median lobe of male genitalia pointed at

apex (HROMÁDKA, 1980, Abb. 6)..................*S. cephalotes* SHARP.
52 (49) Body broader and flatter at least in female; pronotum and elytra reddish brown to dark brown.
53 (54) Male genitalia narrower, narrowed apically............*S. etsukoae* NAOMI.
54 (53) Male genitalia broader, subparallel-sided.
55 (56) Head blackish; median lobe of male genitalia angulate at apicolateral corners in dorsal view (HROMÁDKA, 1980, Abb. 1)....*S. biwa* HROMÁDKA.
56 (55) Head with interocular area reddish brown in anterior half, blackish in posterior one; median lobe of male genitalia rounded at apicolateral corners in dorsal view (Fig. 2 G)...................*S. koinobori* HROMÁDKA.

Acknowledgements

My hearty thanks go to Prof. Y. HIRASHIMA and Assoc. Prof. K. MORIMOTO of the Entomological Laboratory, Kyushu University, for their constant guidance and encouragement. I am grateful also to Mr. S. NOMURA and Dr. C. OHKUMA (Kyushu University), Mr. H. OHISHI (Kyoto City), Mr. S. IMASAKA (Shimabara City), Dr. Y. SASAJI (Fukui University), Mr. K. YAMAGISHI (Meijo University) and Mr. H. HARADA (Fukuoka City) for valuable specimens.

摘　要

直海俊一郎：日本産メダカハネカクシ亜科の研究．VIII．メダカハネカクシ属 *Parastenus* 亜属，3．—— 本論文で，*Parastenus* 亜属に含まれる日本産 29 種について検索表を作成した．また，*Stenus koinobori* HROMÁDKA の雄を最初に記録して，その交尾器 (Fig. 2 G–H) を図示した．本種の雄交尾器は，*S. biwa* HROMÁDKA のものに似ているが，中央片の先端両側部が丸くなっている点が異なっている．*S. hirtellus* SHARP, *S. cirrus* BENICK および *S. cirriformis* NAOMI の3種は，第4付節が単純，腹側板が欠消していて，腹部には強い光沢があり，長い直立毛を疎に装うという形質を共有していることにより，ひとつの単系統群を形成していると考えた．加えて，*S. indubius* SHARP の頭部の点刻や雄交尾器形態に変異があることを報告した．

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Elytra, *Tokyo*, **16** (2): 72, November 15, 1988

新 刊 紹 介

Coléoptères Staphylinidae de la Région Paléarctique Occidentale.

I. Généralités, Sous-familles: Xantholininae et Leptotyphlinae, Supplément à la Nouvelle Revue d'Entomologie, 1972, Tome II, fascicule 2, ix+651 pp.; II. Sous famille Staphylininae Tribus Philonthini et Staphylinini, Supplément à la Nouvelle Revue d'Entomologie, 1974, Tome IV, fascicule 4, 593 pp.; III. Sous famille Staphylininae Tribu Quediini, Sous famille Paederinae Tribu Pinophilini, Supplément à la Nouvelle Revue d'Entomologie, 1978, Tome VIII, fascicule 4, 364 pp.; IV. Sous famille Paederinae Tribu Paederini 1 (Paederi, Lathrobii), Supplément à la Nouvelle Revue d'Entomologie, 1982, Tome XII, fascicule 4, 440 pp.; V. Sous famille Paederinae Tribu Paederini 2, Sous famille Euaesthetinae, Supplément à la Nouvelle Revue d'Entomologie, 1984, Tome XIII, fascicule 4, 424 pp.

これらのモノグラフは，ハネカクシ分類学者として名高い Dr. H. Coiffait により，1972年から1984年までの13年がかりで，5冊に分けて出版された大著である．全5冊で2,472ページという質実ともに重厚な，ハネカクシ研究家にとって必読の書物である．第1巻の一般編には，ハネカクシ分類の歴史と原理，幼虫，蛹および成虫の一般形態，分布 (生物地理)，生態，採集法，標本解剖および保存の方法について約110ページをついやしてあるので，ハネカクシ分類学の入門書としても，たいへん便利なものとなっている．

分類編は，第1巻の115ページから第5巻末までである．その冒頭で，幼虫形態に基づいて，短翅型ハネカクシ類 (Brachelytra) を Staphylinomorpha, Aleocharomorpha と Oxyporidae の3大群に分類するという Paulian, R. (1941, Mém. Mus. Hist. nat. Paris, (N.S.), **15**: 1–361) のフランス体系が採択されている．Coiffait はこの体系を少しだけ改変して，Staphylinomorpha には Staphylinidae の1科を，Aleocharomorpha には Micropeplidae, Stenidae, Oxytelidae, Tachyporidae, Trichophyidae, Habroceridae, Hypocyptidae および Aleocharidae の8科を含めているので，Brachelytra 全体は 10 科に分類されている．

これら10科のうち，Staphylinidae 科 (狭義) の5亜科 (Staphylininae, Xantholininae, Paederinae および Leptotyphlinae) のハネカクシで，旧北区西洋域 (paléarctique occidentale)，つまり北はスカンジナビア半島北部，南はモロッコ，アルジェリア，リビアなどを含む北アフリカ，西はカナリア，マデイラ，アゾレス諸島，東はバイカル湖にわたる広域に分布している種類が，5冊のモノグラフのなかに見事に分類されている．

各亜科では亜科の定義が記されたのち，適所に族，亜族，属および種のしっかりした検索表が作成されているので，実用的価値が高い．各属では詳細な (再) 記載がなされていて，全形図，成虫の口器，胸部，腹部形態の図だけではなく，できるかぎり幼虫形態の図も加えてある．種は分類順に配列され，各種には (再) 記載のほかに，関連文献，シノニム，分布が記してある (ただし Leptotyphlinae には再記載がないが，この亜科については1959年に彼自身によるモノグラフ (Rev. fr. Ent., **26**: 237–437) が出ている)．各巻末には完全な参考文献と分類名索引が載せてあるので，これもまたたいへん利用しやすい．

これらのモノグラフは，E. W. Classey Ltd., P. O. Box 93, Faringdon, Oxon, SN7 7DR, England から入手できる．値段は I (£36.00), II (£36.00), III (£40.00), IV (£52.00), V (£61.00) である (ただし paperback 版)．Hard cover ものは Sciences Nat, 2, rue André, Mellenne Venette, 60200 Compiegne, France で購入可能である．

(直海俊一郎)

Elytra, Tokyo, **16** (2): 73–84, November 15, 1988

Studies on the Subfamily Steninae (Coleoptera, Oxyporidae) from Japan

IX. Subgenus *Hypostenus* of the Genus *Stenus* LATREILLE, Part 1*

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Abstract The *Stenus rufescens* complex of the subgenus *Hypostenus* is newly defined, and is divided into 11 species-groups. Of these, the groups of *Stenus asyura* and *S. oni* are dealt with. The *asyura* group is composed of five new species, *Stenus asyura*, *S. basara*, *S. santira*, *S. bicara* and *S. kazami* and the *oni* group is of one new species, *S. oni*. Male genitalia of these six new species are figured for comparison.

This is the first report of my study on the subgenus *Hypostenus* from Japan. SHARP (1874) first described five new species of *Hypostenus* from Japan. He added six more new species to the Japanese fauna in 1889. BERNHAUER (1912) described a new species *Stenus weisei* from Hokkaido (Nemoro). After that no contribution had been made toward the Japanese fauna of the *Hypostenus* until HROMÁDKA started in the study of the Japanese Steninae in 1979. HROMÁDKA (1979) described a new species *Stenus hanami* from Honshu. He redescribed *Stenus rufescens* SHARP and described five new allied species mainly from Kinki District in 1982. He also revalidated *Stenus testaceopiceus* from the synonym of *S. rufescens* and newly recorded it from Japan. Thus, a total of 19 species of the subgenus *Hypostenus* are recognized from Japan at present.

I intend to revise the Japanese species of the subgenus *Hypostenus*, including descriptions of 31 new species and reports of unrecorded species (1) and subspecies (1) in the 9th to 15th parts of the papers on my study of the Japanese Steninae. In this 9th part, the *Stenus rufescens* complex of the subgenus *Hypostenus* is newly defined, and the *S. asyura* and *S. oni* groups are dealt with. Six new species are described and their male genitalia are figured.

Subgenus *Hypostenus* REY

Hypostenus REY, 1884, Annls. Soc. Linn. Lyon, (2), **30**: 390. (Type species: *Stenus kiesenwetteri* BERNHAUER, designated by TOTTENHAM, 1939.)

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* Contribution from the Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka (Ser. 3, No. 282).

Hypostenus is the largest subgenus of the genus *Stenus* LATREILLE and is defined at present by the following two characters: 1) 4th segments of tarsi bilobed and 2) abdomen without paratergites, and its terga and sterna completely fused or separated only by suture.

The subgenus *Hypostenus* is distributed in all zoogeographical regions. PUTHZ (1971, 1972, 1982) recorded 83 species of the genus *Stenus* from New Guinea and the ratio of *Hypostenus* species is 65.1%. NAOMI (1987) reported that the Japanese fauna of the genus *Stenus* consists of 120 species including undescribed species, and the ratio of *Hypostenus* species is 40.8%. The genus *Stenus* is composed of 116 species in the central European Region (LOHSE, 1964) and the ratio of *Hypostenus* species is 8.6%. These data show that the ratio of *Hypostenus* species to all the species of the genus *Stenus* decreases as the latitude becomes higher in the Northern Hemisphere.

PUTHZ (1972) reported that there is no brachypterous *Hypostenus* in New Guinea, although many of them are distributed in high altitudinal zone. The hypostenids show little variations in the body lengh and color, and in the internal structure of the male genitalia. Thus, he concluded that "most of the New Guinea *Stenus* are in an early stage of speciation". On the contrary, 37 out of 51 species of *Hypostenus* are apterous or brachypterous in Japan, although their habitats widely range from high montane areas to low lands near the sea shore. There are considerable variations among these Japanese species in each of the above-mentioned characters. Therefore, the Japanese *Hypostenus* is considered to be in an advanced stage of speciation.

The *Stenus rufescens* Complex

Thirty-seven species of the brachypterous (or apterous) *Hypostenus* show difference in the body color (pale yellow through reddish brown to black), general appearance, etc. However, they have the following characters in common: 1) head broader than elytra (except for *Stenus oni* sp. nov. from Nikko), 2) eyes strongly convex, 3) elytra short and constricted at the bases, 4) legs yellow to reddish yellow and 5) abdomen cylindrical, and subparallel-sided or weakly narrowed posteriorly, with short, dense and decumbent hairs (except for one new species from Okinawa Main Island). As these characters are not credible enough to form them as a monophyletic group because of their parallel occurrence outside the component species, I tentatively call it "*S. rufescens* complex" here. They are classified into 11 species-groups on the basis of the body color and the modification of the ventral surface of the abdomen in male and the shape of the male genitalia, etc.

1. Group of *S. asyura*

This group is composed of 5 new species, *Stenus asyura*, *S. basara*, *S. santira*, *S. bicara* and *S. kazami*, and is distributed from Chûbu through northern Kantô to Tôhoku Districts in Honshu (Fig. 2).

The diagnosis of the *asyura* group is as follows: 1) head bicolorous, frontoclypeal area usually reddish brown, interocular area entirely blackish, or reddish brown in the median part and dark brown to black at sides, 2) 6th and 7th sterna each evenly convex, flat or very shallowly depressed at posteromedian part in male, and 3) male genitalia with median lobe broad, angulate at apicolateral parts (except for *S. kazami* sp. nov.), apical part with an acicular projection or obtusely pointed.

Stenus asyura sp. nov.

(Fig. 1 A)

Male and female. Body length: 3.0–3.2 mm.

Body pale yellowish brown to brown, moderately shiny, interocular area along inner margins of eyes and 7th to 9th abdominal segments dark brown to black; antennae, maxillary palpi and legs yellowish.

Head broader than elytra (1.11: 1), 1.67 times as broad as long, labrum sparsely haired, with anterior margin rounded, frontoclypeal area convex, sparsely haired, interocular area almost flat with a pair of depressions, the depressions longitudinal, parallel and shallow, median part between the depressions moderately convex; punctures moderate in density, shallow, interstices between punctures minutely sculptured. Eyes strongly convex. Antennae reaching a little before posterior margin of pronotum, slender, 3rd to 8th segments thin, 9th to 11th each elongate oval, with relative lengths of segments from base to apex as 8: 9: 17: 12: 10: 7: 7: 6: 6: 6: 7.

Pronotum about as long as or a little longer than (1.04: 1) elytra, as long as broad, broadest at anterior 2/5, moderately constricted at base, side margins almost rounded; disk slightly uneven, almost glabrous, with a median longitudinal shallow depression; punctures dense, interstices between punctures very narrow, minutely sculptured.

Elytra broader than long (1.17: 1), constricted at base, side margins rounded, hind margins together forming a broad V-shaped emargination; punctures dense, a little larger than those on pronotum. Hind wings reduced, elongate oval, 0.51 times as long as elytra.

Legs moderate in length, hind tarsi 0.66 times as long as hind tibiae.

Abdomen elongate and cylindrical; punctures dense, regular and round on 3rd tergum, punctures becoming smaller and sparser posteriorly from 3rd to 8th terga; pubescence yellowish red, short, sparse and decumbent.

Male. Abdomen weakly narrowed posteriorly; 8th sternum with an arcuate emargination at the middle of posterior margin; 9th sternum with a pair of pointed apicolateral projections. Genitalia (Fig. 1 A) with median lobe broad, subparallel-sided, apical margin with an acicular projection at the middle and with a small emargination on each side of the projection; parameres thick, extending a little beyond apex of the projection, each with two setae at apex.

Female. Abdomen subparallel-sided; 8th sternum entire.

Holotype, male (Type No. 2665, Kyushu Univ.), Jigokudani, Mt. Yatsu, Yamanashi Pref., 8. vii. 1982, S. NAOMI leg. Paratypes, 10 exs., same data as for holotype.

Distribution. Japan (Chûbu District).

Remarks. This new species is closely allied to *Stenus basara* sp. nov., but is separable from the latter by the structure of the male genitalia. The median lobe is more deeply emarginate at the sides of the apical projection. The parameres are shorter and two setae are present at each apex.

Stenus basara sp. nov.

(Fig. 1 F)

Male and female. Body length: 3.1–3.6 mm.

Head blackish and shiny, with frontoclypeal area and anterior part of interocular area reddish brown, pronotum and elytra usually reddish brown, but sometimes dark brown to black, moderately shiny, abdomen reddish brown, 7th to 9th segments more or less infuscate; antennae, maxillary palpi and legs reddish brown.

Head broader than elytra (1.17: 1), 1.63 times as broad as long, frontoclypeal area very sparsely punctate, interocular area shallowly concave, with a pair of depressions, median longitudinal area between the depressions gently convex; punctures round, sparser on the middle than near inner margins of eyes, interstices between punctures distinctly sculptured. Antennae reaching posterior 2/3 of pronotum, 8th segment smallest, 9th to 11th each elongate oval, with relative lengths of segments from base to apex as 10: 10: 20: 10: 9: 8: 8: 6: 7: 7: 9.

Pronotum a little longer than elytra (1.05: 1), about as long as broad, broadest at anterior 2/5, moderately constricted at base, side margins rounded; disk uneven, with a median longitudinal groove, the groove longer and broader than that in *S. asyura* sp. nov.; punctures very dense and subrugose.

Elytra broader than long (1.12: 1), constricted at base, gradually broadened posteriorly, hind margins together forming a broad and shallow emargination; punctures dense, large and subrugose on anterior half, almost regular on posterior half. Hind wings completely lost in the specimens examined.

Legs moderate in length, hind tarsi 0.67 times as long as hind tibiae.

Abdomen with punctures round, dense and regular on 3rd tergum, punctures becoming smaller posteriorly from 3rd to 8th terga; pubescence golden yellow to reddish yellow, decumbent.

Male. Seventh sternum very shallowly depressed at posteromedian part, with a very shallow emargination at posterior margin; 8th sternum with a moderate emargination at posterior margin; 9th sternum arcuately emarginate and minutely serrate at posterior margin, with posterolateral projections strongly pointed. Genitalia (Fig. 1 F) with median lobe broad, very weakly narrowed apically, apical margin

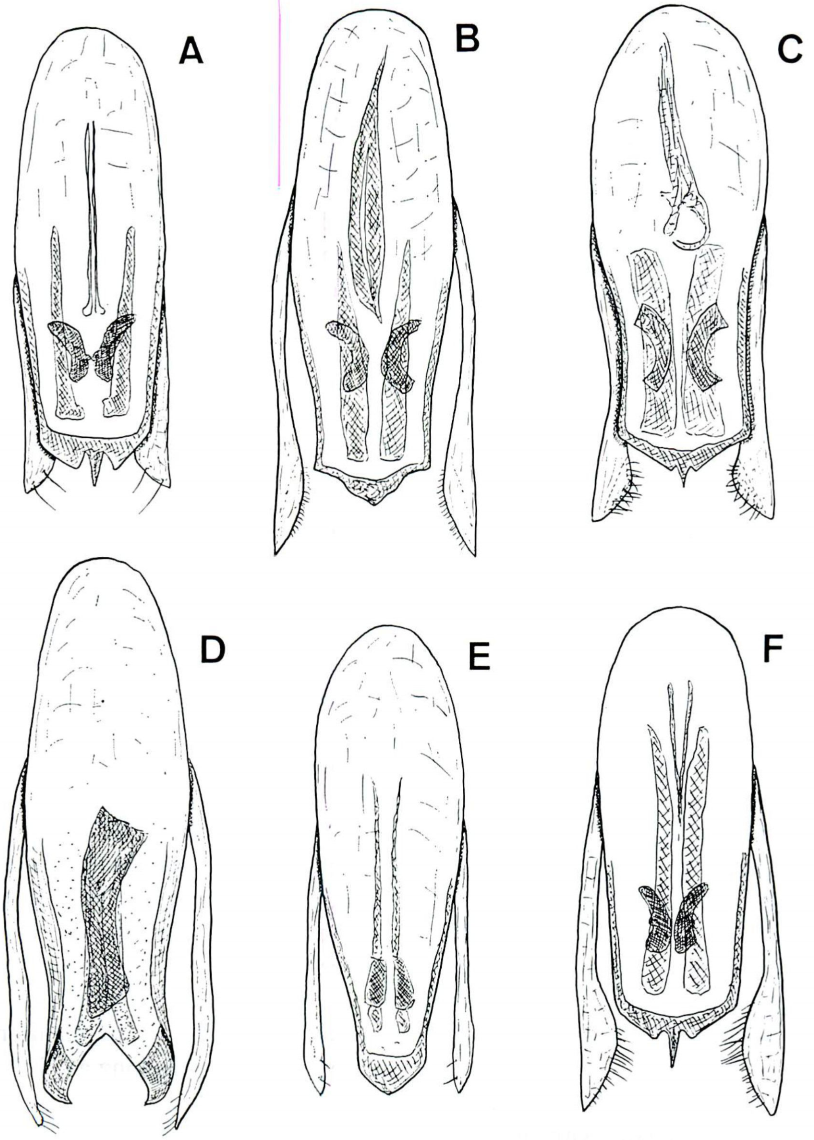

Fig. 1. A, *Stenus asyura* sp. nov; B, *S. bicara* sp. nov.; C, *S. santira* sp. nov.; D, *S. oni* sp. nov.; E, *S. kazami* sp. nov.; F, *S. basara* sp. nov. A–F, Male genitalia in dorsal view.

similarly modified as in *S. asyura* sp. nov., but the emarginations are shallower; parameres long, extending beyond apex of median lobe, apical parts broad, with hairs along inner margins.

Female. Eighth sternum minutely pointed at the middle of posterior margin.

Holotype, female (Type No. 2666, Kyushu Univ.), Aokigahara, Mt. Fuji, Yamanashi Pref., 20. vii. 1982, S. NAOMI leg. Paratypes, 9 exs., same data as holotype; 1 ex., same locality as holotype, 23. vii. 1984, S. NOMURA leg.; 2 exs., Okuniwa, Mt. Fuji, Yamanashi Pref., 21. vii. 1982, S. NAOMI leg.; 3 exs., Konsei Pass, Nikkô, Tochigi Pref., 30. vi. 1982, S. NAOMI leg.

Distribution. Japan (Honshu: Chûbu to northern Kantô Districts).

Remarks. This new species is closely allied to *S. asyura* sp. nov., but the interocular area is black behind the middle, the pronotum is provided with a longer longitudinal depression, and the parameres of the male genitalia are longer.

Stenus santira sp. nov.

(Fig. 1 C)

Male. Body length: 3.2–3.5 mm.

Body yellowish brown to reddish brown, moderately shiny, interocular area along inner margins of eyes dark brown to black; antennae blackish except for 4 or 5 yellowish basal segments; maxillary palpi and legs yellow to yellowish brown.

Head broader than elytra (1.09: 1), 1.85 times as broad as long, frontoclypeal area sparsely punctate, interocular area very shallowly concave, with a pair of depressions, median longitudinal part between the depressions gently convex; punctures round, shallow and almost umbilicate, interstices between punctures minutely sculptured. Antennae reaching posterior 1/4 of pronotum, 8th segment a little broader than 7th, 9th to 10th each elongate oval, 11th pointed, with relative lengths of segments from base to apex as 10: 10: 20: 10: 9: 8: 8: 6: 7: 7: 10.

Pronotum about as long as elytra, as long as broad, broadest at anterior 2/5, side margins much rounded; disk slightly uneven, very densely punctate, with a median longitudinal depression, the depression as long as that in *S. asyura* sp. nov.; punctures very dense and subrugose, interstices between punctures minutely sculptured.

Elytra broader than long (1.21: 1), weakly constricted at base, side margins rounded, hind margins together forming a broad and shallow emargination; punctures very dense and round. Hind wings reduced, 0.45 times as long as elytra.

Legs moderate in length, hind tarsi 0.63 times as long as hind tibiae.

Abdomen elongate, with punctures and pubescence similar to those in *S. asyura* sp. nov.

Male. Sixth and 7th sterna each flat or very weakly depressed at posteromedian part, 7th sternum with a very shallow emargination at the middle of posterior margin; 8th sternum with a moderate emargination at posterior mergin; 9th sternum with an arcuate emargination at posterior margin and pointed apicolateral projections. Genitalia (Fig. 1 C) with median lobe bulbous at base, parallel-sided in apical half, distinctly angulate at apicolateral parts, apicomedian projection shorter than that in *S. asyura* sp. nov., emarginations at its sides shallower than those in *S. asyura* sp.

nov.; parameres extending beyond apex of apicomedian projection, broad and obliquely truncate at apical parts which are haired on inner margins.

Holotype, male (Type No. 2667, Kyushu Univ.), Mt. Zaô, Miyagi Pref., 25. vi. 1983, S. NOMURA leg. Paratypes, 1 male, Kawasaki-chô, Miyagi Pref., 25. vi. 1983, S. NOMURA leg.; 1 male, Mt. Chôkai, Yamagata Pref., 5. vii. 1985, S. NOMURA leg.

Distribution. Japan (Honshu: Tôhoku District).

Remarks. This new species is closely allied to *S. asyura* sp. nov., but the antennae are darker in color, and the 6th and 7th sterna each is flat or very weakly depressed at the posteromedian part in male. In addition, the male genitalia have a shorter apicomedian projection of the median lobe.

Stenus bicara sp. nov.

(Fig. 1 B)

Male and female. Body length: 3.2–3.4 mm.

Body reddish brown to dark brown and shiny, interocular area along inner margins of eyes and 7th to 9th abdominal segments dark brown to black; antennae dark brown except for 2 or 3 yellowish basal segments; maxillary palpi and legs reddish brown.

Head broader than elytra (1.17: 1), 1.59 times as broad as long, frontoclypeal area sparsely punctate and separated from interocular area by a V-shaped line, interocular area almost flat with a pair of depressions, the depressions longitudinal, shallow and convergent anteriorly, median part between the depressions weakly convex; punctures sparse, smaller on the middle than near inner margins of eyes, interstices between punctures minutely sculptured. Antennae slender, reaching posterior 1/5 of pronotum, 7th to 10th segments gradually broadened apically, 8th smallest, 9th to 10th each elongate oval, 11th pointed, with relative lengths of segments from base to apex as 10: 10: 21: 11: 10: 8: 7: 5: 6: 7: 10.

Pronotum about as long as elytra, as long as broad, broadest at anterior 1/3, moderately constricted at base, side margins much rounded in anterior 2/3; disk uneven, with a median longitudinal depression which is almost as long as pronotum; punctures dense and subrugose, interstices between punctures clearly sculptured.

Elytra broader than long (1.15: 1), constricted at base, weakly broadened posteriorly, hind margins together forming a broad and shallow emargination; punctures very dense, round to elliptical and subrugose. Hind wings reduced, 0.43 times as long as elytra.

Legs moderate in length, hind tarsi 0.73 times as long as hind tibiae.

Abdomen cylindrical, subparallel-sided; punctures and pubescence similar to those in *S. asyura* sp. nov.

Male. Seventh sternum flat at posteromedian part, with a very shallow emargination at the middle of posterior margin; 8th sternum with a large V-shaped emargination at posterior margin; 9th sternum with a moderate emargination at posterior margin and pointed apicolateral projections. Male genitalia (Fig. 1 B) robust, median lobe broadest near the middle, distinctly angulate at apicolateral parts, obtusely pointed at the middle of apical margin; parameres extending beyond apex of median lobe, similar in shape to those of *S. basara* sp. nov., with short hairs on apico-internal margins.

Female. Eighth sternum obtusely pointed at the middle of posterior margin.

Holotype, female (Type No. 2668, Kyushu Univ.), Chûzenji, Nikko, Tochigi Pref., 28–30. vi. 1982, S. NAOMI leg. Paratypes, 1 male and 1 female, same data as holotype; 1 male, Yumoto, Nikko, Tochigi Pref., 29. vi. 1982, S. NAOMI leg.

Distribution. Japan (Honshu: northern Kantô District).

Remarks. This new species is allied to *S. kazami* sp. nov., but the head is paler in color and the male genitalia are different in shape. The median lobe is broader in apical half and more angulate at the apicolateral parts. The parameres are longer and the apical parts are broader and provided with shorter hairs along the inner margins.

Stenus kazami sp. nov.

(Fig. 1 E)

Male and female. Body length: 2.8–3.5 mm.

Body reddish brown to brown, moderately shiny, posterior half or whole part of interocular area and 7th to 9th abdominal segments dark brown to black; antennae yellowish brown except for 4 or 5 brownish apical segments; maxillary palpi and legs yellow to yellowish brown.

Head broader than elytra (1.12: 1), 1.74 times as broad as long, frontoclypeal area sparsely haired and pubescent, interocular area almost flat, with a pair of depressions, the depressions longitudinal, shallow and broad; median part between the depressions weakly convex; punctures moderate in density, round, distinct and almost regular, interstices between punctures minutely sculptured. Antennae reaching posterior 2/3 of pronotum, 7th to 10th segments gradually broadened apically, 11th pointed, with relative lengths of segments from base to apex as 10: 8: 15: 8: 8: 6: 5: 4: 5: 6: 8.

Pronotum as long as elytra, about as long as broad, broadest at anterior 2/5, constricted at base, side margins rounded in anterior 2/3; disk weakly uneven, densely punctate, with a median longitudinal depression, the depression 0.81 to 0.90 times as long as pronotum; punctures very dense and subrugose, interstices between punctures indistinctly sculptured.

Elytra broader than long (1.24: 1), weakly constricted at base, hind margins together forming a very shallow emargination; punctures large and dense, interstices between punctures very narrow. Hind wings much reduced, 0.24 times as long as elytra.

Legs elongate, hind tarsi 0.67 times as long as hind tibiae.

Abdomen subparallel-sided; punctures and pubescence similar to those in *S. asyura* sp. nov.

Male. Eighth sternum with a moderate emargination at posterior margin; 9th sternum with a deep V-shaped emargination at posterior margin and pointed apico-lateral projections. Male genitalia (Fig. 1 E) with median lobe elongate oval in basal 2/3, broadest at basal 3/10, then gradually narrowed apically, with pentagonal apical part, internal armatures thinner than those in the other members of the *asyura* group; parameres extending to apex of median lobe, hardly broadened apically, each with two short hairs at apex.

Female. Abdomen robuster than in male; 8th sternum obtusely pointed at the middle of posterior margin.

Holotype, female (Type No. 2669, Kyushu Univ.), Kawarabô, Mt. Hayachine, Iwate Pref., 22–24. vi. 1980, S. NAOMI leg. Paratypes, 1 male and 2 females, same data as holotype.

Distribution. Japan (Honshu: Tôhoku District).

Remarks. This new species is allied to *S. bicara* sp. nov., but the antennae are shorter and the male genitalia are different in structure. The median lobe is narrowed apically from the basal 3/10 to the pentagonal apical part and the parameres extend just to the apex of the median lobe.

2. **Group of *S. oni***

This group is composed only of one new species, *Stenus oni* from Nikko, Tochigi Prefecture (Fig. 2). The diagnosis of the *oni* group is as follows: 1) head blackish with frontoclypeal area yellowish along anterior margin, 2) 4th to 6th sterna each moderately and 7th deeply depressed at posteromedian part in male, and 3) male genitalia with median lobe strongly bifurcate at apex.

Stenus oni sp. nov.

(Fig. 1 D)

Male and female. Body length: 3.4–3.6 mm.

Head blackish and shiny, frontoclypeal area yellowish along anterior margin, pronotum and elytra reddish brown to dark brown, moderately shiny, 3rd to 6th abdominal segments brownish, each blackish along posterior margin, 7th to 9th abdominal segments dark brown to black; antennae, labrum, maxillary palpi and legs reddish brown.

Head a little narrower than elytra (0.96: 1), 1.65 times as broad as long, fronto-clypeal area sparsely punctate, interocular area almost flat, with a pair of depressions,

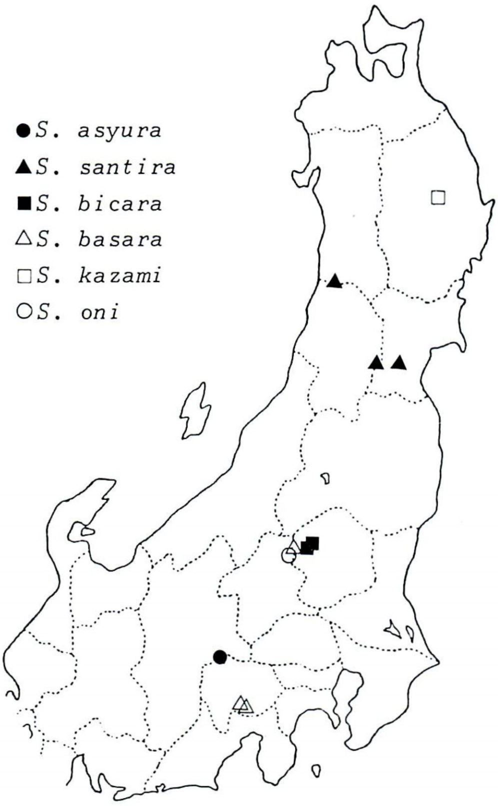

Fig. 2. Map showing the distribution of the *Stenus asyura* and *oni* groups.

the depressions longitudinal, broad and shallow, median part between the depressions weakly convex; punctures large, round and almost regular, interstices between punctures minutely sculptured. Eyes less strongly convex than those in the *asyura* group. Antennae a little thicker than those in the *asyura* group, reaching posterior 2/3 of pronotum, 8th segment smallest, 9th to 11th together forming a loose club, with relative lengths of segments from base to apex as 10: 10: 17: 10: 9: 8: 8: 5: 8: 8: 9.

Pronotum a little shorter than elytra (0.95: 1), as long as broad, broadest at anterior 2/5, constricted at base, side margins rounded; disk uneven, with a median longitudinal depression, the depression 0.50 to 0.68 times as long as pronotum, deepest at the middle, with very minute and reticulate sculpture on its bottom; punctures dense, irregular and subrugose.

Elytra broader than long (1.26: 1), constricted at base, side margins rounded, hind margins together forming a wide and shallow emargination; disk uneven, with round, dense and subrugose punctures. Hind wings completely absent in the specimens examined.

Legs thick, hind tarsi 0.66 times as long as hind tibiae.

Abdomen subparallel-sided; punctures and pubescence similar to those in *S. asyura* sp. nov.

Male. Fourth to 6th sterna each moderately depressed at posteromedian part; 7th sternum deeply depressed at posteromedian part, the depression becoming deeper toward posterior margin which is arcuately emarginate, sides of the depression distinctly ridged; 8th sternum with a deep V-shaped emargination at posterior margin; 9th sternum with a pair of very small apicolateral projections. Genitalia (Fig. 1 D) with median lobe broadest a little before the middle, then narrowed both anteriorly and posteriorly, with a large and deep emargination (or strongly bifurcate) at apical part, each projection slightly curved internally and pointed at apex; parameres slender, extending beyond apices of the projections, sparsely haired on apico-internal parts.

Female. Antennae and abdomen a little thicker than in male; 8th sternum almost entire.

Holotype, female (Type No. 2670, Kyushu Univ.), Mt. Maeshirane, Nikkô, Tochigi Pref., 2. vii. 1982, S. NAOMI leg. Paratype, 1 male, same data as holotype.

Distribution. Japan (Honshu: northern Kantô District).

Remarks. This new species is similar in general appearance to the members of the *asyura* group, but the frontoclypeal area is blackish except for yellowish anterior margin, and the median lobe of the male genitalia is strongly bifurcate at the apex.

Acknowledgements

I express my cordial thanks to Prof. Y. HIRASHIMA and Assoc. Prof. K. MORIMOTO of the Entomological Laboratory, Kyushu University, for their kind guidance. I also thank Mr. S. NOMURA (Kyushu University) for his gift of the valuable stenine specimens examined in this paper.

摘　　要

直海俊一郎：日本産メダカハネカクシ亜科の研究. IX. メダカハネカクシ属 *Hypostenus* 亜属, 1. —— 本論文では, *Hypostenus* 亜属のうちで, トビイロメダカハネカクシ *Stenus rufescens* に近縁で後翅が退化した群を *S. rufescens* 複合群と称した. この複合群は, 1) 頭部は上翅より幅広く, 2) 複眼はいちじるしく大きく突出し, 3) 上翅は短かく基部が狭まり, 4) 肢は黄色から赤黄色を呈し, 5) 腹部は円筒形で, 短毛を密に装う, などの形質で特徴づけられた. 現在, 日本産 37 種がこの複合群に属し, それらは 11 種群に分類できた. ここでは *asyura* 種群と *oni* 種群について論じた.

asyura 種群は, *Stenus asyura*, *S. basara*, *S. santira*, *S. bicara* および *S. kazami* の5新種からなり, 中部地方, 北関東地方および東北地方に分布する. この種群は頭部が黒色と赤褐色の2色からなり, 雄交尾器中央片は通常, 先端側方部が角ばり, 先端中央部は鋭く尖った突起をもつか, 鈍く尖る, などの形質で特徴づけられた. 一方, *oni* 種群は, 1新種 *Stenus oni* だけからなり, 北関東地方（日光）に分布している. この種群は, 頭部は黄色の額頭盾前縁部をのぞいて黒色であり, 雄交尾器中央片先端部に大型のV字状切れ込みがある, などの形質で特徴づけられた.

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Elytra, *Tokyo*, **16** (2): 85–88, November 15, 1988

A New Inopeplid Beetle (Coleoptera, Inopeplidae) from the Ryukyu Islands

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Abstract A new inopeplid beetle, *Uruminopeplus sakaii* gen. et sp. nov. is described from the Ryukyu Islands. The new genus is distinguished from *Inopeplus* mainly by the peculiarities of prothorax and tarsi.

Although the Japanese species of the family Inopeplidae were recently revised by the junior author (HATTA, 1988), we had an opportunity to examine an additional species from the Ryukyus through the courtesy of Messrs. SAKAI and TOMOKUNI. It was captured during the survey for the "Study of Essential Factors for Preservation of Wild Life in the Nansei Islands" in 1987. After a careful examination, it proved to be a new species belonging to a new genus. It will be described in the present paper under the name of *Uruminopeplus sakaii* gen. et sp. nov.

Before going further, we wish to express our sincere gratitude to Dr. Shun-Ichi UÉNO, Messrs. Masaaki TOMOKUNI and Masahiro SAKAI for their kindness extended to us in many ways.

Genus *Uruminopeplus* nov.

Type species: *Uruminopeplus sakaii* gen. et sp. nov.

Body elongate, extremely flat, strongly constricted between prothorax and elytra. Head large, distinctly punctate, provided with a short mediolongitudinal impression and with a shallow fovea at the inner side of each eye; clypeus and labrum transverse and tranparent; eyes lateral and moderately prominent; antennae submoniliform, moderately long, scape large, 2nd and 3rd segments small, 4th to 10th subequal, 11th longer than the preceding one. Pronotum transverse, broadest at apical third, thence slightly narrowed anteriad and strongly so posteriad; posterior halves of lateral and posterior margins conjointly rounded and bordered; surface distinctly punctate and furnished with a pair of strong foveae at the lateral sides near the middle. Scutellum moderate. Elytra short, finely and sparsely punctate; shoulders evident. Terminal 3 or 4 tergites exposed from elytra as in staphylinid beetles. Prosternal process broad with rounded apex. Metasternum well developed and finely punctate. Legs moderate in length, femora thick, tarsal formula 4–4–4, coxae of each leg widely separated, with fore cavities open behind.

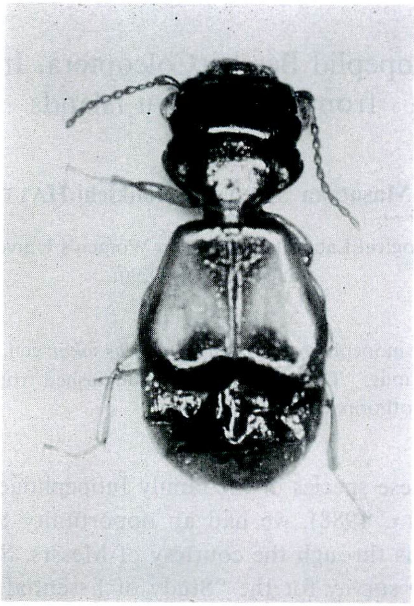

Fig. 1. *Uruminopeplus sakaii* gen. et sp. nov., from Ohkuni-rindô on Is. Okinawa-hontô, the Ryukyus.

This new genus is closely related to the genus *Inopeplus* SMITH, 1851, but can be distinguished from the latter by having the following features: clypeus and labrum transverse, pronotum provided with a strong fovea on each lateral side and with distinct lateroposterior margin, and tarsal formula 4–4–4.

The new generic name is derived from *Urum*[*a*] meaning the Ryukyus in old language plus *inopeplus*.

Uruminopeplus sakaii sp. nov.

(Figs. 1–2)

Body shining, brown to dark brown, elytral macula and legs yellowish. Maculae on elytra M-shaped.

Head capsule including eyes about 2.4 times as broad as long, slightly broader than pronotum; disc distinctly and sparsely punctate, the punctures being longitudinally rugose at anterior and lateral portions, integument smooth; clypeus about 4.4 times as broad as long and smooth; labrum about 5 times as broad as long, obsoletely microreticulate and bearing some pubescence in anterior area. Pronotum about 1.8 times as broad as long; disc furnished with minute and sparse punctures in addition to primary distinct and sparse punctures which are almost the same as those on head. Scutellum semicircular. Elytra about 1.3 times as broad as pronotum, a little broader than long; lateral sides distinctly broadened terminally, with rounded apices; disc

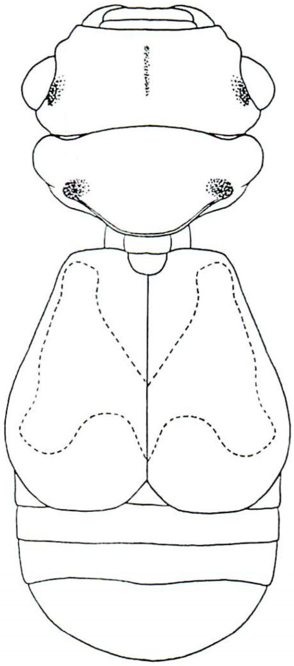

Fig. 2. *Uruminopeplus sakaii* gen. et sp. nov.; outline of body.

furnished with two different kinds of punctures, one of which is shallow, large and sparse and the other minute and sparse; integument smooth. Abdominal tergites finely punctate and microreticulate.

Ventral surface of head striolate in lateral areas; mentum microreticulate. Prosternum finely and sparsely punctate, its process being wider than long with rounded apex. Meso- and metasternum and abdominal sternites shining, finely and sparsely punctate. All tarsi 4-segmented, 1st segment longer than 2nd, 3rd the shortest, 4th the longest.

Sexual dimorphism not pronounced in external characters.

Length: 3.8–3.9 mm; breadth: 1.6–1.8 mm.

Holotype: ♂, Ohkuni-rindô (alt. 320 m), Is. Okinawa-hontô, Ryukyus, 21. X. 1987, M. SAKAI leg. (in coll. Natn. Sci. Mus., Tokyo). Allotype: ♀, same locality as for the holotype (alt. 300 m), M. TOMOKUNI leg. (in coll. Nagoya Women's Univ.).

This new species is easily separated from all the known Japanese species in the elytral macula and the pronotal structure and conformation as described above. It is named in honour of Mr. M. SAKAI who is a good friend of ours and one of the collectors of the beetle.

摘要

佐藤正孝・八田耕吉：琉球産の新しいハネカクシダマシ科甲虫．―― 日本産のハネカクシダマシ科には1属3種が知られ，そのうちの2種が琉球列島に分布している．1987年度に行なわれた“南西諸島における野生生物の種の保存に不可欠な条件に関する研究”のための調査中に，友国雅章，酒井雅博両氏によりハネカクシダマシ属に近縁の1新属新種が採集されたので，ここに記載した．

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Elytra, Tokyo, **16** (2): 89–94, November 15, 1988

A New Cerambycid Beetle Related to *Glaphyra kojimai* (Coleoptera, Cerambycinae) from the Korean Peninsula

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Abstract A new molorchine cerambycid beetle belonging to the genus *Glaphyra* is described from the central part of the Korean Peninsula, under the name of *G. ichikawai*. It is the first representative of the genus from the peninsula, and has close relationship with *G. kojimai* endemic to the mainland of Japan.

Through the courtesy of Mr. Kyoji ICHIKAWA, I have recently been able to examine ten specimens of a small molorchine species obtained in the suburbs of Seoul City in South Korea. A close examination revealed that it was the first Korean representative of the genus *Glaphyra* and was a new species closely related to *G. kojimai* (MATSUSHITA) (1939, p. 56). *Glaphyra kojimai* has so far been known to be endemic to the Japanese territory, i.e. Hokkaido, Honshu, Shikoku, Kyushu, and Tsushima Is., and all the populations from these areas are identical at the species level. The present discovery is very interesting, since it is not only the first record of the genus from the Korean Peninsula but also a record of a direct relative of *G. kojimai* in that peninsula.

In the following lines, I am going to describe this interesting new species. The new name is dedicated to Mr. K. ICHIKAWA, who offered me valuable material and useful suggestion. The abbreviations used herein were already explained in a previous paper of mine (NIISATO, 1987, p. 297).

Glaphyra (s. str.) *ichikawai* sp. nov.

(Figs. 1–13)

Related to *G. kojimai*, but the body is shorter and has relatively large fore body, the head is voluminous, hardly constricted even at the neck and has moderately prominent eyes and shorter and stouter antennae, the elytra are broad and relatively short, with the sides not so strongly narrowed to apices as in those of *G. kojimai*, and the median lobe of male genitalia is large though slenderer, with the ventral plate strongly turned up at the sides.

Colour blackish brown to dark reddish brown, reddish on mouth-parts, antennae and legs; elytra dark reddish brown, each usually decorated with oblique spot near suture of basal half, though the shape of the spot is variable according to individuals.

Head large and voluminous, HW/PA 1.03–1.21 (M 1.14), rather strongly convex, hardly constricted at neck, coarsely rugose and partially intermixed with large punctures, and rather thinly clothed with pale hairs; frons almost flattened, relatively narrow, FB/FL 1.33–1.52, with the arcuate grooves along the lateral sides narrow though distinct, and a median longitudinal groove narrow and deep, nearly extending to vertex, somewhat sparsely provided with large punctures; clypeus moderately transverse, with frontoclypeal suture weakly arcuate and deep; vertex moderately concave, sometimes slightly raised at middle; genae about three-tenths the depth of lower eyelobes, usually dentate externally in frontal aspect; eyes moderately prominent, with moderate upper-lobes; antennae relatively short and stout, 11-segmented in male, 1.33–1.58 times (male) or 0.76–0.80 times (female) as long as body, clothed with dense minute pubescence on segments 3–11, though the pubescence is sometimes not so dense on segment 3 (or segments 3 and 4); scape subquadrate, widest at apical third, coarsely punctured, about one and one-fourth the length of segment 3, segments 3 and 4 rather distinctly thickened apically, the former segment about seven-tenths the length of the latter, segments 5 and 6 weakly thickened apically, segment 7 the longest, terminal segment distinctly longer than segment 10 and distinctly appendiculate at the extremity in male.

Pronotum relatively large and broad, weakly contracted towards apex, with moderate basal constriction; PL/PA 1.32–1.56 (M 1.44) in male or 1.39–1.44 (M 1.40) in female, PB/PA 0.88–1.00 (M 0.92) in male or 0.88–0.94 (M 0.91) in female, PW/EW 0.80–0.89 (M 0.86) in male or 0.84–0.86 (0.91) in female, PL/EL 0.73–0.94 (M 0.79) in male or 0.83–0.88 (M 0.86) in female; sides subparallel in front, rather distinctly sinuately narrowed (male) or gently sinuately narrowed (female) to middle, then moderately rounded and with obtuse small tubercles (male) or moderately simply rounded (female) to basal fifth, and then sinuate to basal angles; apex weakly arcuate; base weakly arcuate with slight emargination near middle; disc rather distinctly convex, gently depressed just behind the apex, moderately scattered with large punctures though densely so near base and almost smooth at a brief distance from apex, and also with slight raised impunctate areas, of which two pairs of rounded ones are in apical fourth and just behind the middle, though the two pairs are usually joining in male and the posterior pair is not recognized in female, and an oblong longitudinal one at the centre just behind the middle, moderately clothed with long pale erect hairs. Scutellum moderate and slightly rounded at apex, densely clothed with pale pubescence.

Elytra relatively broad, not so long, reaching the posterior margin of abdominal tergite 2, slightly exposing the sides of metathorax, narrowly dehiscent in apical fourth, EL/EW 1.22–1.39 (M 1.32); sides with moderately prominent humeri, gradually and weakly arcuately narrowed to moderately rounded apices; disc weakly convex, broadly and longitudinally concave near suture just behind scutellum, and each with an arcuate and slightly oblique impression near the middle of sutural sides, coarsely and irregularly punctured, moderately clothed with short pale hairs and partially with

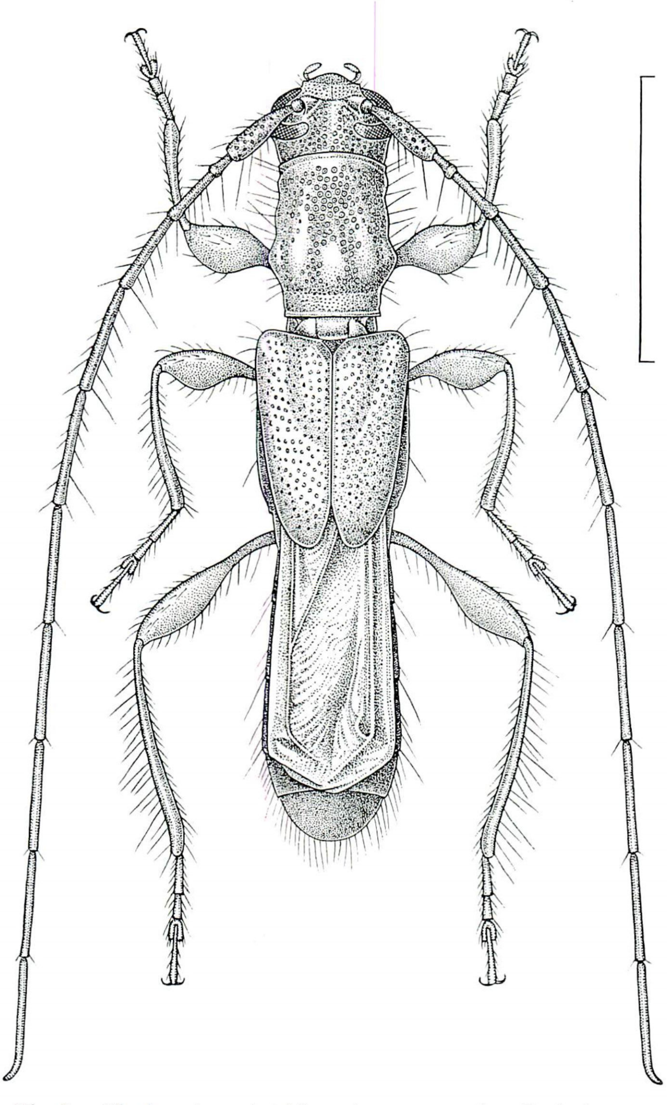
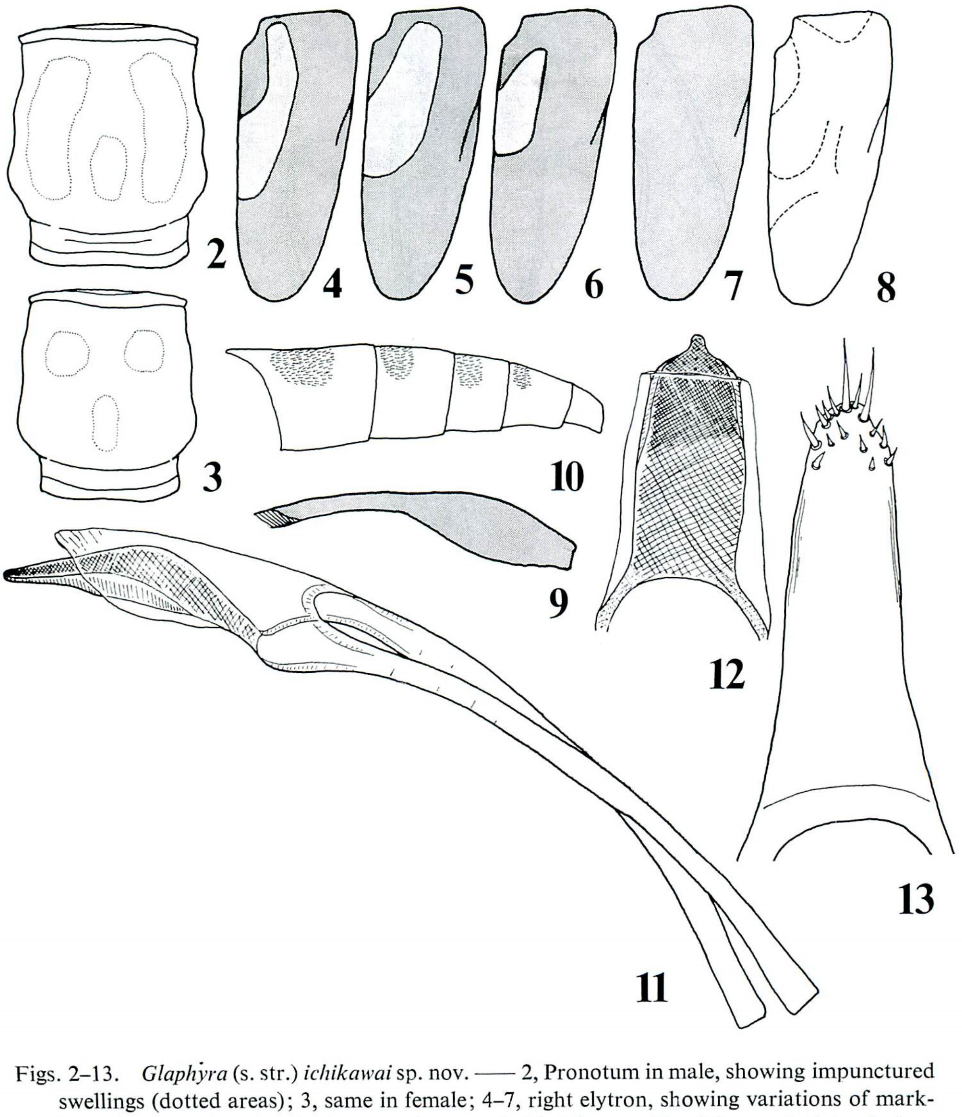


Fig. 1. *Glaphyra* (s. str.) *ichikawai* sp. nov., male. Scale 2 mm.

medium-sized pale hairs near humeri. Hind wings a little less than one and three-tenths the length of hind body, hardly emarginate near base of hind margins, with the basal anal vein barely recognized.

Prosternum moderately convex though distinctly concave at apical fifth, coarsely and densely punctured, rather sparsely clothed with long pale erect hairs; prosternal process narrow and flattened between fore coxal cavities, and hardly divergent to apex; furcasternum well developed, usually exceeding the hind margin of epipleura, with the anterior process narrow and moderate in length. Meso- and metathoraces very sparsely punctured, haired as on prosternum though slightly denser at the sides. Abdomen broad and relatively short, with sides slightly divergent to apex, rather sparsely provided with small punctures, moderately clothed with irregular-sized pale erect hairs and partially with recumbent silvery white pubescence near the anterior



Figs. 2–13. *Glaphyra* (s. str.) *ichikawai* sp. nov. —— 2, Pronotum in male, showing impunctured swellings (dotted areas); 3, same in female; 4–7, right elytron, showing variations of markings; 8, same, showing the impressed areas; 9, hind femur; 10, abdomen in lateral view, showing the distribution of dense pubescence; 11, median lobe in lateral view; 12, same, apical part in dorsal view; 13, paramere in dorsal view.

margin of sides of sternites 3–6.

Legs stout and fairly short; hind leg nearly three-fourths the length of body, with femora moderately clavate in six-elevenths, tibiae moderately arcuate, and the first tarsal segment nearly equal in length to the following two segments combined.

Male genital organ medium-sized, moderately sclerotized, and basically similar to that of *G. kojimai*. Median lobe a little less than three-eighths the length of hind body, slightly arcuate and moderately convex in the apical part, exposing the apical two-elevenths of ventral plate, with rather long median struts which are a little more than three-fifths the length of median lobe; viewed laterally, dorsal plate obliquely truncate at apex and moderately arcuate at sides, ventral plate slightly arcuate on the ventral margin; the ventral plate weakly contracted towards both apex and base, with the apical part abruptly narrowed and bluntly produced at the extremity, and with the sides strongly turned up in apical third; median orifice rather narrow. Tegmen rather slender, a little less than a half the length of median lobe; paramere rather narrow though not so long, nearly one-third the length of tegmen, gradually narrowed towards bluntly rounded apex, which is sparsely provided with short setae.

Body length: 4.4–6.8 mm.

Type series. Holotype: male, allotype: female, and paratypes: 7 males & 1 female, U-I-Dong, Seoul City, South Korea, 1. V. 1985, K. ICHIKAWA leg. The holo- and allotypes are preserved in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo, and the paratypes are in the private collections of K. ICHIKAWA and mine.

Notes. Though considerably differing in external features, this new species seems to have a close relationship to *G. kojimai*. This is suggested by the structural similarity of male genital organ between the two species. The median lobe is more or less elongate, and has the long median struts, and the triangular apical part of ventral plate which is provided with the produced extremity. Besides, the similarity is also suggested by the narrow elongate paramere in the two species. Externally, *G. ichikawai* is similar to *G. gracilis* (HAYASHI) (1949, p. 29), although the genitalic difference between the two is still considerable. It is most probable that the two species, *G. ichikawai* and *G. kojimai*, have been derived from a common ancestor but have evolved independent of each other.

According to Mr. K. ICHIKAWA, all the known specimens of this new species were found on the flowers of a maple tree which grew at the sides of a valley.

摘　要

新里達也：朝鮮半島より発見されたコジマヒゲナガコバネカミキリに近縁の1新種. —— 韓国ソウル市郊外から，ヒゲナガコバネカミキリ属の基亜属に属する1新種を，*Glaphyra* (s. str.) *ichikawai* NIISATO (和名新称：イチカワヒゲナガコバネカミキリ) として記載，命名した．本種は，体が小さく，体色の黒化する傾向が強いことから，一見すると日本に固有のオダヒゲナガコバネカミキリに類似しているが，おもに雄交尾器の形態から，琉球を除く日本全土に広く分布するコジマヒゲナガコバ

ネカミキリにむしろきわめて近縁な種と考えられる.

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Elytra, Tokyo, **16** (2): 95–101, November 15, 1988

Notes on the Lepturine Genus *Pidonia* (Coleoptera, Cerambycidae) from East Asia

I. Redescription of *Pidonia tsukamotoi* MIZUNO, 1978, and Some Notes on its Vertical Distribution and Habits

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Abstract *Pidonia tsukamotoi* MIZUNO, 1978, is redescribed on the basis of the specimens of the type series and newly collected ones from the vicinities of the type locality. Its vertical distribution is noted with reference to the vertical vegetational zonation.

The genus *Pidonia* MULSANT consists of about 80 known species distributed over the temperate zone of the Holarctic Region. Most of them are known to occur in East Asia. Up to the present, 42 species have been known to occur in Japan. However, some species have not always been satisfactorily known, and need careful revision. *Pidonia tsukamotoi* MIZUNO, which is a rare species in Japan, is one of the examples. The original description of this species is insufficient, because some important diagnostic features are not mentioned. I am going to give a redescription of this species on the type series and newly collected specimens.

Before going further, I wish to express my hearty thanks to Messrs. N. ABE, K. AOKI, H. EBIHARA, H. HIRAYAMA, T. KISHII, K. MINE, K. MIZUNO, S. TAKECHI and S. TSUYUKI who gave me opportunity to study on the interesting material.

Pidonia (*Pidonia*) *tsukamotoi* MIZUNO, 1978

Pidonia tsukamotoi MIZUNO, 1978, Ent. Rev. Japan, **32**: 39, pl. 1, figs. 1–9 (♂, Mt. Senjô, Nagano Pref., Japan, July 18, 1957; KISHII coll.).

Body relatively small, elongate, slightly tapering apically (male) or more robust (female) and furnished with pale fulvous pubescence.

Length: 8.5–6.0 mm (male), 9.1–7.1 mm (female); breadth: 2.2–1.4 mm (male), 2.4–2.1 mm (female).

Color. Body brown to black; vertex and tempora black, frons and antennal supports dark brown; mouthparts brown except for dark brown apex of each mandible; eyes grayish black; antennae brown, third and following segments infuscated at their apices, sometimes entirely black; prothorax and scutellum black, sometimes dark brown; coxae and trochanters brownish yellow; femora almost dark brown in

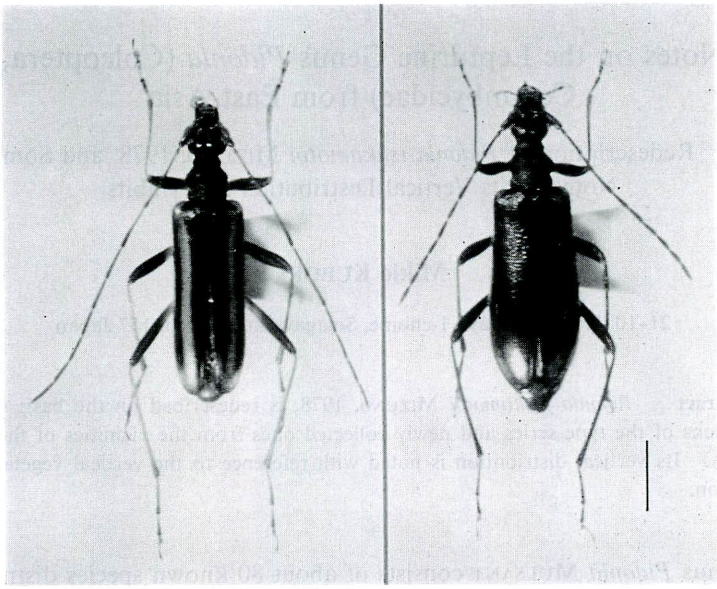


Fig. 1. *Pidonia tsukamotoi* MIZUNO, ♂ (left), ♀ (right), from Hatchôdaira in Nagano Prefecture. Scale: 2 mm.

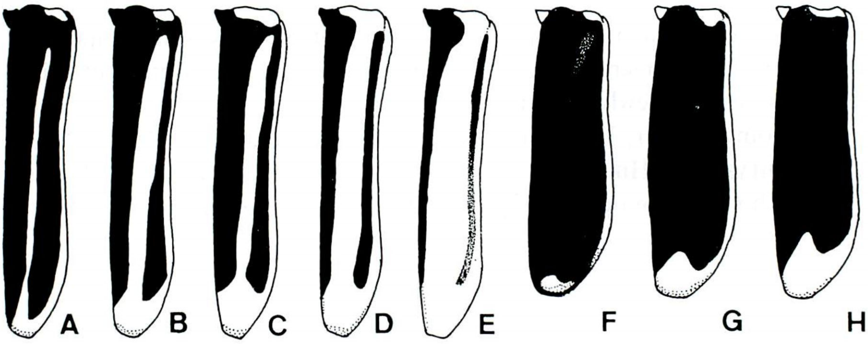


Fig. 2. Variation of elytral markings in *Pidonia tsukamotoi* MIZUNO. —— A–E, Male, F–H, female.

apical halves and fulvous in basal halves, sometimes almost brown; tibiae brown; tarsi dark brown; claws reddish brown; elytra yellowish brown with black markings, which are distinctly enlarged in female. Ventral surfaces: head, thorax and abdomen black to dark brown, the middle of second to fifth sternites reddish brown, the black portion enlarged in female.

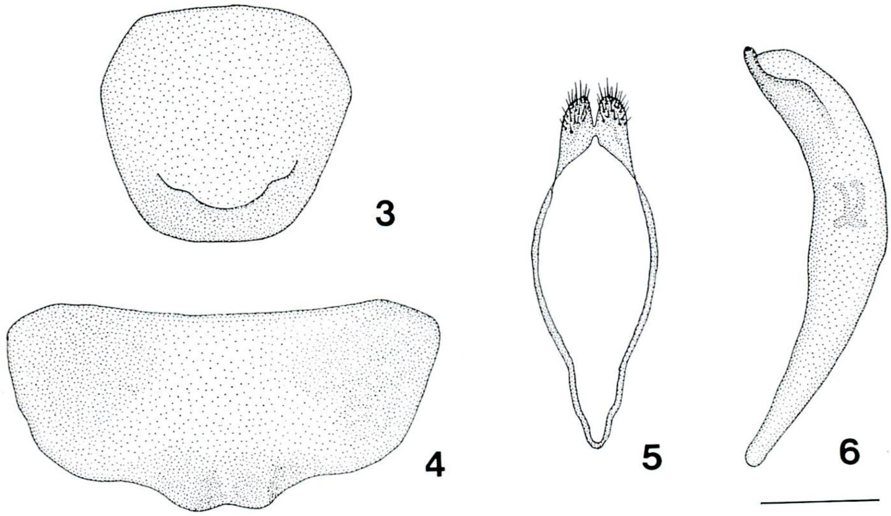
Elytral markings: in male, sutural marking broadened basally, terminating in apical one-ninth of elytra, the base of sutural marking distinctly constricted, but usually narrowly continuing to base, basal marking lacking, latero-basal, latero-median and latero-posterior markings distinctly present, usually fused with one another, forming a submarginal vitta, apical band lacking, sometimes apex of elytron darkened; in female, elytral markings more developed than in male, elytra almost black, excepting a pair of humeral brown markings, apical fulvous markings and narrow fulvous marginal lines, apical band lacking, sometimes apex of elytron darkened.

Structure. Head broader across eyes than basal width of prothorax (male, 1.24: 1; female, 1.10: 1); terminal segment of maxillary palpus broadened apically with straight outer margin; tempora dully angulately prominent, narrowed posteriorly in anterior half and abruptly constricted in posterior half, almost impunctate and shining, with several setae; frons subvertical and transverse, covered with coarse punctures, bearing a fine but distinct median longitudinal furrow extending backwards to vertex; vertex convex above, coarsely punctured; two to five supraorbital setae present; gula shining, very sparsely clothed with long pubescence. Eyes relatively large and prominent, roughly faceted, weakly emarginate at middle of internal margins. Antennae relatively long and slender, inserted just behind the level across frontal margins of eyes; apical two segments surpassing elytral apices in male; antennae barely attaining middle of elytra in female; first segment distinctly dilated towards apex, weakly shining, sparsely clothed with fine pubescence, second to eleventh segments densely clothed with fine appressed pubescence and sparsely with fine erect pubescence; comparative length of each antennal segment as follows:— $5>1+2=3>6\geqq4$ (male) or $1+2>5>3>6\geqq4$ (female).

Prothorax longer than basal width (male, 1.20: 1; female, 1.07: 1), deeply constricted both behind apex and before base, and angularly prominent laterally just before the middle; breadth across prominent portions distinctly broader than base (male, 1.10: 1; female, 1.08: 1); basal margin bisinuate, obviously broader than apical margin (male, 1.32: 1; female, 1.30: 1); disk of pronotum relatively flat, sparsely clothed with fine pubescence, coarsely punctured, with an incomplete longitudinal glabrous line at middle; posterior lateral setae long; prosternum shining, extremely thinly clothed with short pubescence; meso- and metasterna finely punctate, densely clothed with fine appressed pubescence. Scutellum small and triangular, slightly longer than broad, bearing thin pubescence on the surface.

Elytra 2.66 times (male) or 2.57 times (female) as long as basal width, gradually narrowed posteriorly (male) or expanded behind middle (female), and separately subtruncate at apices; surface closely and deeply punctate and densely clothed with subappressed pubescence; interspace between punctures broader than diameter of each puncture.

Legs relatively slender, finely punctate, clothed with short pubescence; femora clavate, with subappressed pubescence; hind femora reaching elytral apex in both sexes; tibiae linear, with suberect pubescence; tarsi densely clothed with short pubescence on under surface; first segment of metatarsus longer than the following two taken together; third segment strongly dilated apically and deeply emarginate at middle of apex.



Figs. 3–6. *Pidonia tsukamotoi* MIZUNO, ♂. —— 3, Last tergite; 4, last sternite; 5, lateral lobes of male genitalia, ventral view; 6, median lobe of the same, lateral view. Scale: 0.3 mm.

Abdomen elongate and gradually convergent towards apex; pygidium prominently exposed in female; surface of each sternite densely covered with extremely fine pubescence; in male, apex of last sternite shallowly emarginate at middle (Fig. 4), apex of last tergite subtruncate (Fig. 3); in female, apex of last sternite round, apex of last tergite subtruncate.

Male genital organ moderately sclerotized; median lobe relatively thick, weakly curved ventrally (Fig. 6) and obtusely pointed at apex; lateral lobes slightly shorter than median lobe, each apex produced and sparsely furnished with relatively long terminal hairs (Fig. 5); endophallus with a short diverticulum at base, long and furnished with a pair of falcate sclerites.

Specimens examined. ♂ (Holotype), Mt. Senjô, Nagano Pref., 18. VII. 1957, K. TSUKAMOTO leg.; 1 ♂, same data as for the holotype; 1 ♂, Hatchôdaira (2,025 m alt.), Nagano Pref., 22. VII. 1979, K. SUZUKI leg.; 1 ♂, Hatchôdaira (2,020 m alt.), Yamanashi Pref., 22. VII. 1979, K. SUZUKI leg.; 6 ♂♂, Hatchôdaira, Nagano Pref., 21. VII. 1984, N. ABE & S. TAKECHI leg.; 5 ♂♂, Hatchôdaira, 19. VII. 1984, K. SUZUKI leg.; 5 ♂♂, Hatchôdaira, 19. VII. 1985, S. TSUYUKI leg.; 6 ♂♂, Hatchôdaira, 21. VII. 1985, K. SUZUKI leg.; 6 ♂♂, 1 ♀, Hatchôdaira, 20. VII. 1986, H. EBIHARA leg.; 2 ♀♀, Hatchôdaira, em. 20. VI. 1988, bred by M. KUBOKI; 1 ♀, Dainichi-goya (2,000 m alt.), Yamanashi Pref., em. 8. VII. 1988, bred by M. KUBOKI; 1 ♂, Honzawa Spa (2,080 m alt.), Nagano Pref., 21. VII. 1985, K. AOKI leg.; 2 ♂♂, Shirakomaike (2,050 m alt.), Nagano Pref., 28. VII. 1985, K. SUZUKI leg.; 5 ♂♂, Shirakomaike, 6. VIII. 1986, H. EBIHARA leg.; 4 ♂♂, Houou-goya (2,300 m alt.), Yamanashi Pref., 22. VII. 1984, K. MINE leg.; 2 ♂♂, Houou-goya, 23. VII. 1984, K. MINE leg.; 1 ♀, Houou-goya, 1. VIII. 1985, K. HOSODA leg.; 8 ♂♂, Houou-goya, 4. VIII. 1985, K.

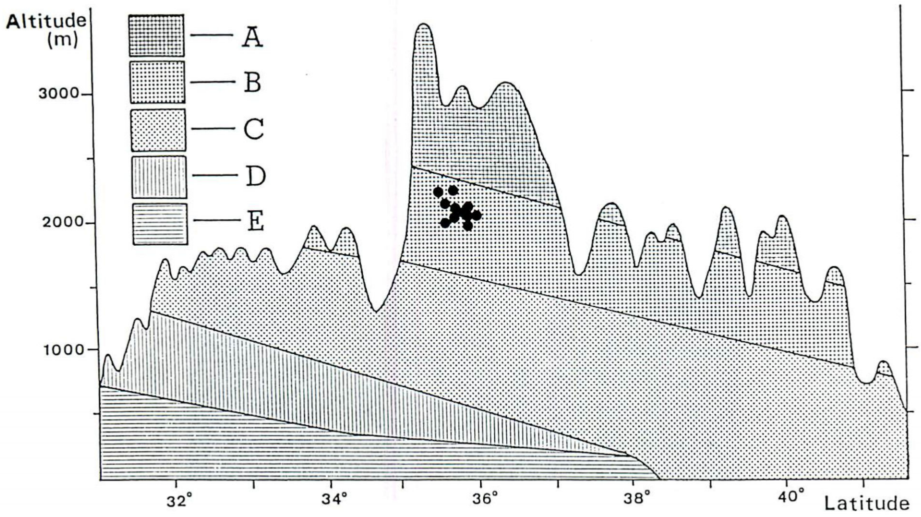


Fig. 7. Vertical distribution of *Pidonia tsukamotoi* MIZUNO in connection with vertical vegetational zones of Honshu, Shikoku and Kyushu. —— A, Climax of alpine desert, grassland and scrub (including *Pinus pumila* formation); B, climax of conifer forest (*Abies–Picea* formation); C, climax of deciduous broadleaved forest (*Fagus crenata* formation); D, climax of intermediate conifer forest (*Tsuga sieboldi* formation); E, climax of evergreen broadleaved forest (*Castanopsis cuspidata* formation).

MINE leg.; 1 ♀, Houou-goya, 5. VIII. 1985, K. MINE leg.

Distribution. Japan (central Honshu).

The vertical distribution of this species is shown in Fig. 7 in connection with the vertical vegetational zones of Japan excepting Hokkaido. Its distributional range is limited horizontally in the southern part of central Honshu and vertically mainly to the evergreen conifer zone.

Flight period. July to August.

Flower record. *Rodgersia podophylla* (a single case is known).

Host plant. *Betula ermani.*

Remarks. This species may be recognized by having the black coloration of body and elytral markings. The proportions of the antennal segments and the form of the expanded elytra in the female are distinctive features of this species.

Biological notes. The larvae of *P. tsukamotoi* feed on wet barks of dead trees. The larvae, which pupate directly in the bark, form circular cells. When the bark is thin or when it has been removed prior to pupation, the pupal cells are formed in the soil around the roots (Fig. 8).

Most specimens known have been beaten out from needles of young trees of *Tsuga diversifolia*, captured when flying around birch trees, or taken when walking on the ground. Only a single male has been taken on the flower of *Rodgersia podo-*

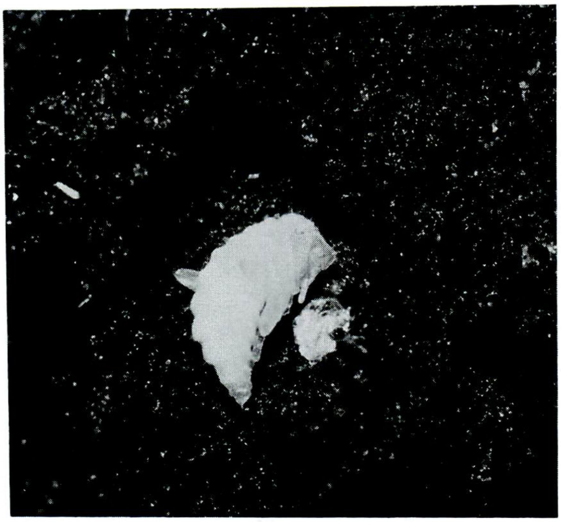


Fig. 8. Pupa of *Pidonia tsukamotoi* in pupal cell formed in the soil.

phylla (Hirayama, 1985).

The hind guts of seven adult beetles of this species were examined under a microscope, but no pollen was found in their hind guts. Of the 7 specimens (4 ♂♂, 3 ♀♀) available for this study, two males and one female have only a very few broken tissues of plants in their hind guts. This suggests that the species may require little or no food in the adult stage.

摘要

窪木幹夫: 東アジア産ヒメハナカミキリ属の知見. I. タカネヒメハナカミキリの再記載とその垂直分布と生態に関する知見. —— タカネヒメハナカミキリは，仙丈ケ岳産の2頭の雄個体に基づいて，Mizuno (1978) により新種として報告された. これ以後，長野，山梨，静岡各県の亜高山帯針葉樹林から新産地が報告されたが，いずれも採集されたのは雄個体であった. 1985年8月1日と5日に，山梨県韮崎市鳳凰小屋付近で2頭の雌が採集された. 本論文では，記載に使用された標本に加え，それ以後に採集された雌雄個体を調べ，タカネヒメハナカミキリの再記載を行い，雄交尾器，末端節腹板，背板，そして雌雄の上翅斑紋の変異を図示した.

本種の幼虫は，ダケカンバの立ち枯れの樹皮中で生活し，樹皮中や根元付近の土中に円形の蛹室をつくり，その中で蛹化する. 成虫は，他のヒメハナカミキリ類と違ってほとんど訪花せず，コメツガの幼木に静止している個体，ダケカンバの周辺を飛翔している個体，地上を歩行している個体などが採集される. 成虫を解剖し，後腸内容物を調べたところ，雌雄とも花粉は発見されず，時に少量の植物組織片が見つかった個体があった. このことから，タカネヒメハナカミキリは，成虫期にはほとんど，もしくはまったく摂食しないと推定された.

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Elytra, *Tokyo*, 16 (2): 102, November 15, 1988

ケブカコフキコガネの奄美大島からの記録

佐　藤　正　孝

Masataka SATÔ: Record of *Tricholontha papagena* NOMURA from Is. Amami-Ôshima, the Ryukyus

Abstract　*Tricholontha papagena* NOMURA is newly recorded from Is. Amami-Ôshima. It was collected by Dr. S.-I. UÉNO and Mr. S. SAITO at Kinsakubaru (1♂) and Yuwan (4♂♂), respectively, on March 13, 1988.

ケブカコフキコガネ *Tricholontha papagena* NOMURA, 1952 は，眼が大きく，雄の触角葉片部がいちじるしく長いことにより，この類のなかではいちじるしく異なる新属新種として，沖縄からの1雄に基づいて記載されたものである．その後，黒沢 (1984) は，徳之島から1雄を記録した．基産地の沖縄でも，その後あまり記録がないようである．この春，奄美大島を訪れた際，同行の上野俊一博士および斉藤秀生氏がこの種を採集され，標本を検する機会を得たので，ここに記録しておきたい．

4♂♂，湯湾，13. III. 1988 (灯火)，斉藤秀生採集

1♂，金作原，13. III. 1988 (高さ 2.5 m ぐらいの樹枝上に静止)，上野俊一採集

このように記録の少ない理由は，原記載に用いられた標本こそ8月に得られたものの，その後の記録がすべて 3–4 月になっていて，出現期が早いことによるものだろう．

亜種の問題については，黒沢 (1984) が指摘しているように，これまでに得られている標本も少ないので，ここではこの種が奄美大島で採集されたことのみを報告しておきたい．

末筆ながら，標本を検する機会を与えられた上野俊一博士と斉藤秀生氏のご好意に厚くお礼を申し上げる．

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Elytra, Tokyo, **16** (2): 103–106, November 15, 1988

A New Cerambycid Beetle of the Subgenus *Pseudale* of the Genus *Pterolophia* from Kyushu, Japan

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Abstract A new lamiine species, *Pterolophia* (*Pseudale*) *kyushuensis* sp. nov., is described from the central mountains of Kyushu, Southwest Japan.

The subgenus *Pseudale* of the cerambycid genus *Pterolophia* comprises six known species, four Japanese and two Taiwanese. A new species is herewith added to the Japanese fauna, making the total number seven. The new species was taken on Mt. Shiraiwa in central Kyushu, Southwest Japan.

I wish herewith to express my deep gratitude to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for his critical reading of the original manuscript of this paper. My thanks are also due to Mr. M. AMANO of Kitakyushu-shi who gave me the opportunity to study on the interesting material used in preparing the present paper.

Pterolophia* (*Pseudale*) *kyushuensis sp. nov.

(Figs. 1–5)

Male. Brown to castaneous, with head and prothorax except for apical margin of pronotum more or less dark castaneous.

Head weakly shiny, sparsely and not so much coarsely punctate, with very minute, short yellowish pubescence, which is partially worn out in the type specimen; vertex broadly and deeply concave; eyes comparatively large, each divided into two lobes, the inferior one transverse, rather quadrate, about 0.53 times as high as gena below it; antennae short, not reaching elytral apex, the relative lengths of segments as follows: 3.5: 1: 5.6: 5.1: 3.3: 3.0: 2.5: 2.3: 1.9: 1.6: 1.7.

Pronotum almost lustreless, about 1.25 times as wide as long, rather strongly convex, without distinct swellings near middle, very densely, coarsely punctate, clothed with very minute yellowish scales all over and also with yellowish hairs in the middle.

Scutellum semicircular, very minutely punctate, and with yellowish hairs, which are worn out in almost all parts of the surface in the type specimen.

Elytra shiny, about 1.67 times as long as wide, just twice as long as basal width, fully convex, densely and coarsely punctate, clothed with very minute yellowish scales all over and also with comparatively dense, yellowish hairs in antero-median area;

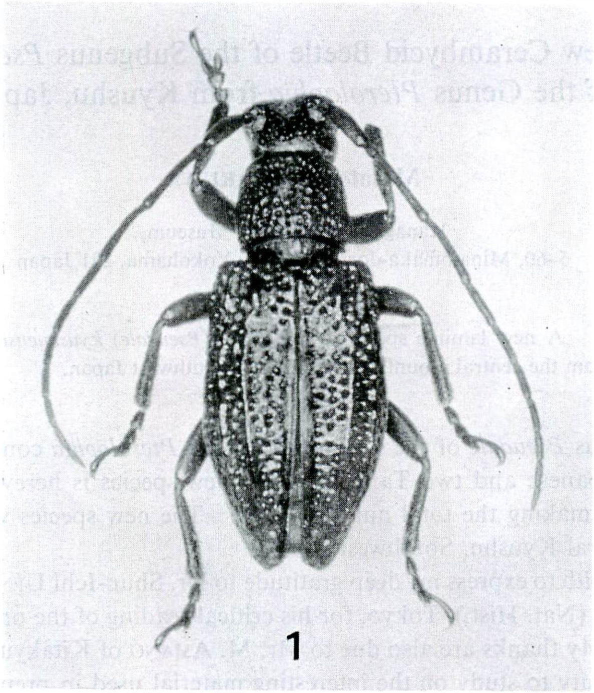


Fig. 1. *Pterolophia* (*Pseudale*) *kyushuensis* sp. nov., ♂ (holotype).

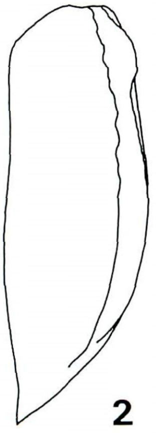
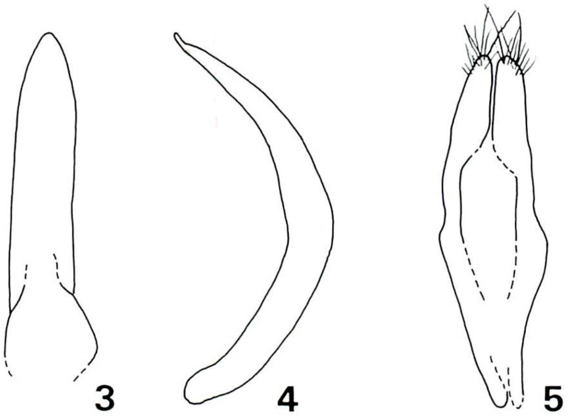


Fig. 2. *Pterolophia* (*Pseudale*) *kyushuensis* sp. nov.; left elytron in lateral view.

disc faintly depressed in basal 1/5, abruptly inclined posteriorly in about apical 2/5, with two pairs of distinct carinae, the inner ones nearly as high as sutural ridge, rather indistinctly connected with a pair of basal swellings, each of which is rather longitudinal and reaches basal margin through a short carina, the outer carinae being longer than the inner, each running from basal margin to before apex and curved outwards; shoulders narrowly rounded; sides almost straightly dilated to the middle, then gently rounded and convergent apicad in almost straight lines; each apex obliquely truncate, with the outer angle narrowly rounded.

Legs relatively slender, clothed with very minute whitish scales or fine whitish pubescence.

Abdomen clothed with fine whitish to pale yellow pubescence in general; segment 1 fringed with long yellow hairs on apical margin; segment 5 trapezoidal with apical corners very broadly rounded.



Figs. 3–5. Male genitalia of *Pterolophia* (*Pseudale*) *kyushuensis* sp. nov.; 3, tegmen; 4, same (lateral view); 5, parameres.

Male genital organ large as compared with body size; tegmen slender, fully curved ventrad, the apex rather rapidly attenuate with the tip very narrowly rounded; parameres shorter than tegmen, the two apical lobes long, each provided with 12–13 long terminal setae.

Body length: about 6 mm; width: 2.5 mm.

Holotype. ♂, Mt. Shiraiwa, Miyazaki Pref., Kyushu, 15–V–1977, K. ADACHI leg. (deposited in the National Science Museum (Nat. Hist.), Tokyo).

Range. Kyushu.

This new species is easily distinguished from the other known species of the subgenus by the characteristic shape of elytra and very minute scales or pubescence on the upper surface.

Notes. 1) Judging from the state of scales or pubescence on the body, the holotype may be an overwintered individual.

2) In Japan, the members of the subgenus *Pseudale* have hitherto been known from insular areas, not from the four main lands. It is therefore very interesting that the present new species was met in the montane zone of central Kyushu, one of the main lands.

摘要

高桑正敏：九州産ハネナシサビカミキリ類の1新種. —— 九州の白岩山から得られた1♂に基づいて，キュウシュウハネナシサビカミキリ（新称）*Pterolophia* (*Pseudale*) *kyushuensis* TAKAKUWA, sp. nov. を記載した．本種は，その特徴的な翅型と体毛の状態とで，同じ亜属のどの既知種からも容易に区別できる．この亜属の種は，これまでに日本では島嶼部のみから知られていたので，九州山地帯での今回の発見はきわめて興味深い．

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Elytra, Tokyo, **16** (2): 107–116, November 15, 1988

The *Kurasawatrechus* (Coleoptera, Trechinae) of the Yamizo Range, Central Japan[1]

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Abstract The anophthalmic trechine beetles from the Yamizo Range, Central Japan, are dealt with. Two new species are described under the names of *Kurasawatrechus yamizonis* and *K. intermedius*, and a new locality is recorded for *K. ohkawai*.

No eyeless beetles were known from the Yamizo Range, stretching from north to south for more than 100 km along the northeastern edge of the Kwantô Plain, Central Japan, until an endogean species of *Kurasawatrechus* was recently discovered by Hideo OHKAWA at its southern part (UÉNO, 1988). For this reason, the whole mountains were excluded from the distributional range of anophthalmic trechines shown on my 1987 map (fig. 11 B in UÉNO, 1987, p. 604). Actually, the mountain range is divided into four blocks, the Yamizos (s. str.), Torinokos, Keisokus and Tsukubas, on the third one of which OHKAWA's discovery was made. Thus, our interest was aroused in finding out what trechines could be met in endogean or upper hypogean habitats of the other three blocks.

Our investigations progressed systematically and promptly, and now I have materials from all the four divisions of the Yamizo Range. All belong to the genus *Kurasawatrechus* as was expected, but they are not all conspecific. They are classified into three species of two different lineages; the species occurring on the Tsukubas is identical with the Keisoku one (*K. ohkawai*), and the specimens from the Torinokos belong to a new species of the same group (the *quadraticollis* group), whereas the trechine beetle occurring on the Yamizos is a new species of the group of *K. eriophorus*. It is difficult to elucidate at present why only the northernmost block harbours a species phylogenetically different from those of the three southern blocks of the same mountain range. However, it seems worth introducing them into science now, since the existence of these species on the Yamizo Range fills in the blank in our knowledge to a considerable extent.

The abbreviations used in this paper are the same as those explained in my previous papers.

Before going further, I wish to thank the following friends of mine, whose enthusiastic searches and help enabled me to complete the present paper: Messrs. Sumao

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[1] This study is supported by the Grant-in-aid for Scientific Research No. 63540603 from the Ministry of Education, Science and Culture, Japan.

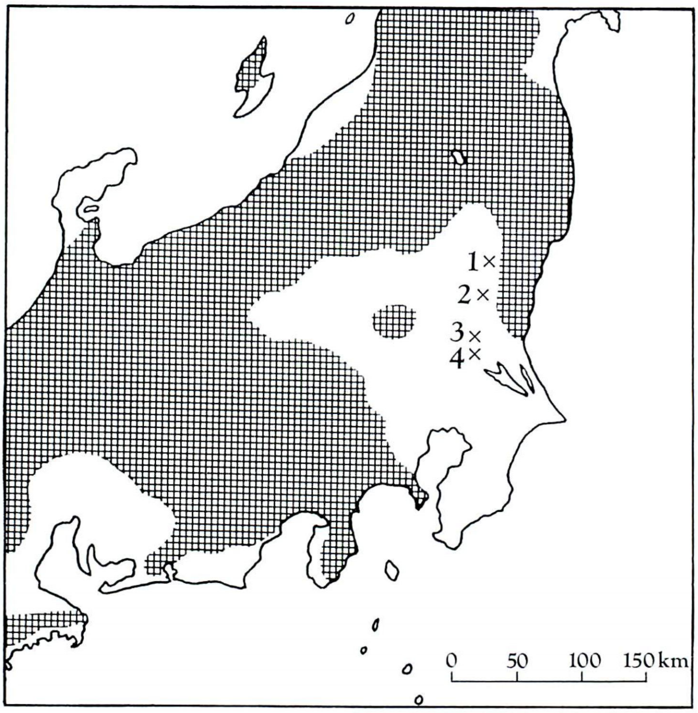


Fig. 1. Localities of *Kurasawatrechus* on the Yamizo Range, superimposed on the central portion of my previous map showing the distribution of anophthalmic trechine beetles in Japan (fig. 11 B in UÉNO, 1987, p. 604). —— 1, Mt. Yamizo-san (*K. yamizonis* S. UÉNO, sp. nov.); 2, Dônoiri at the northwestern foot of Mt. Torinoko-san (*K. intermedius* S. UÉNO, sp. nov.); 3, Mt. Amemaki-yama (*K. ohkawai* S. UÉNO); 4, Mt. Kaba-san (*K. ohkawai* S. UÉNO).

KASAHARA, Kazushige KUSANO, Hideo OHKAWA, Kengo ONDA and Shinzaburo SONE, and Ms. Akiko SAITO.

Kurasawatrechus yamizonis S. UÉNO, sp. nov.

[Japanese name: Yamizo-mekura-chibigomimushi]

(Figs. 2–4)

Length: 2.90–3.45 mm (from apical margin of clypeus to apices of elytra).

Belonging to the group of *K. eriophorus* and probably related to *K. ohshimai* S. UÉNO (1952, p. 15, pl. 2, fig. 1), but readily distinguished from that species by its broader facies with more transverse prothorax and more broadly ovate elytra, darker coloration, obviously shallower elytral striae, sparser pubescence on elytral intervals, and almost glabrous ventral surface.

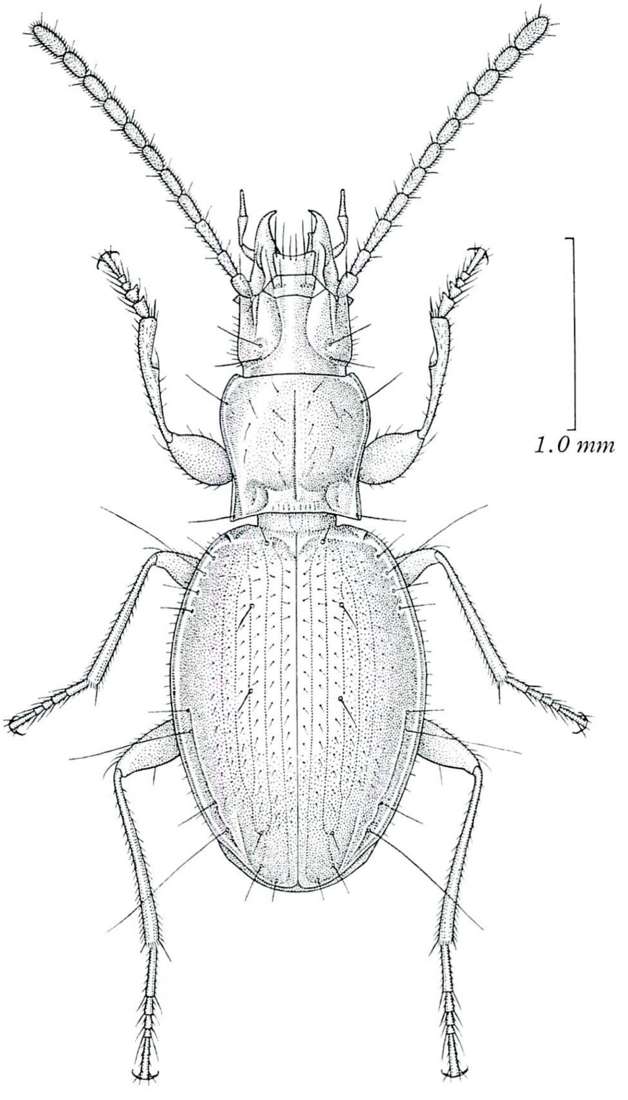


Fig. 2. *Kurasawatrechus yamizonis* S. UÉNO, sp. nov., ♂, from Shikanomata on Mt. Yamizo-san.

Colour relatively dark reddish brown, shiny; palpi pale; apical halves of antennae, ventral surface of hind body, and legs dark yellowish brown, more or less lighter than dorsum.

Head subquadrate, a little wider than long, and depressed above, with deep entire frontal furrows which are strongly arcuate and not angulate at middle; frons and supraorbital areas moderately convex and not pubescent; vertex also bare; two supraorbital pores present on each side close to each other, the anterior one being foveolate; genae convex only near neck constriction, which is shallow though distinct; neck very wide; labrum shallowly emarginate at apex; mentum tooth porrect, narrow, and slightly bifid; palpi short and relatively thin; antennae fairly slender, subfiliform, reaching or nearly reaching basal third of elytra, or a little shorter than that especially in ♀, segment 2 about two-thirds as long as segment 3, segments 4–6 subequal in length to one another and a little shorter than segment 3, 7–10 each subovoid and fully twice as long as wide, terminal segment the longest, half as long again as scape and slightly thicker than the latter.

Pronotum subquadrate, wider than head, a little wider than long, widest at about seven-tenths from base, and more strongly narrowed towards apex than towards base; PW/HW 1.32–1.43 (M 1.37), PW/PL 1.09–1.18 (M 1.13), PW/PA 1.26–1.36 (M 1.32), PW/PB 1.16–1.25 (M 1.20); surface moderately convex and sparsely covered with fairly long, suberect hairs; sides smooth, not ciliated, and narrowly bordered, gently arcuate in front, widely and shallowly sinuate at about basal third, and then either subparallel or slightly divergent towards hind angles, which are usually a little sharp; front angles produced forwards though fairly broad; apex very slightly arcuate in most individuals, more or less narrower than base, which is slightly, though widely, emarginate, PB/PA 1.05–1.15 (M 1.10); median line deeply impressed on the disc, neither reaching base nor deepening in basal area; apical transverse impression obsolete; basal transverse impression shallow and mal-defined, though rather deeply impressed along the basal border; basal foveae large though shallow, extending anteriorly along the side borders; basal area uneven, with notched basal border; no postangular carinae. Scutellum invisible.

Elytra ovate, much wider than prothorax, widest at about three-sevenths from bases, and almost equally narrowed towards bases and towards apices; EW/PW 1.57–1.70 (M 1.61), EL/EW 1.34–1.41 (M 1.38); surface moderately convex in basal two-thirds, less so in apical parts; shoulders effaced, with feebly arcuate prehumeral borders; sides narrowly bordered and ciliated throughout, the reflexed borders becoming narrower towards apices, moderately arcuate at middle, less so behind, and hardly emarginate before apices, which are separately rounded and form a small obtuse re-entrant angle at suture; striae very shallow and fine, obsolete at the side, and impunctate, 1–3 nearly entire, 4 often merging into 3 before the level of anterior dorsal pore, 5 slight though usually traceable, 6 vestigial, 7 effaced, 8 deeply impressed behind the middle group of marginal umbilicate pores; scutellar striole short but distinct; apical striole deeply impressed on apical declivity, becoming shallower anteriad, and usually directed to stria 5 but sometimes to the site of stria 7; intervals completely flat, each bearing a sparse row of short erect pubescence; apical carina obtuse; stria 3 with two setiferous dorsal pores at 1/6–2/9 and 3/7–1/2 from base respectively; in a paratype (♂), an extra dorsal pore present near the base of stria 4 on the left elytron; preapical pore situated at the apical anastomosis of striae 2 and 3, and more distant from apex than from suture.

Microsculpture relatively fine, mostly consisting of isodiametric meshes on head and apical area of pronotum, and of wide meshes on the large part of pronotum and elytra.

Ventral surface almost glabrous, sometimes with a few vestigial pubescence on prosternum and abdominal sternites; anal sternite more strongly rounded at the apical margin in ♂ than in ♀, with a pair of setae in the former and two pairs in the latter. Legs fairly slender; protibiae slightly bowed at the apical parts, entirely pubescent and externally carinate; tarsi thin, segment 1 about as long as segments 2–3 together in mesotarsus, longer than segments 2–3 together but a little shorter than segments 2–4 together in metatarsus; in ♂, two proximal segments of each protarsus rather widely dilated and sharply spurred inwards at apices.

Male genital organ very small and rather lightly sclerotized. Aedeagus only two-ninths as long as elytra, rather lightly or feebly arcuate at middle, lightly compressed, and distinctly curved ventrad at both the basal and apical parts; basal part small and rather abruptly bent, with small basal orifice whose sides are hardly emarginate; sagittal aileron fairly large though hyaline; apical lobe long, slightly inclined to the left, and more or less distinctly, sometimes rather abruptly, curved ventrad; viewed dorsally, apical lobe narrow, parallel-sided, and rounded at the extremity; viewed laterally, apical lobe fairly broad, not attenuate, and widely rounded at the extremity; ventral margin either hardly or shallowly emarginate in profile. Copulatory piece about two-fifths as long as elytra, spatulate in proximal half, and acuminate in apical part, with spiniform apex. Styles relatively slender, left style obviously larger than the right, each bearing three or four stout setae at the apex.

Type series. Holotype: ♂, allotype: ♀, Shikanomata, 3–VII–1988, K. KUSANO & K. ONDA leg. Paratypes: 4 ♂♂, 3 ♀♀, same collecting data as for holotype; 1 ♂, Iriyama, 3–VII–1988, K. KUSANO leg.; 1 ♀, Kaburéishi-zawa, 28–V–1988, S. UÉNO leg.; 5 ♀♀, Kaburéishi-zawa, 29–V–1988, S. UÉNO, S. KASAHARA & S. SONE leg. All deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

Type locality. Mt. Yamizo-san (Shikanomata, 600 m alt., above Kaminanbô of Kurobané-machi in Tochigi Pref.; Iriyama, 850 m alt., of Tanagura-machi in Fukushima Pref.; and Kaburéishi-zawa, 480 m alt., of Daigo-machi in Ibaraki Pref.), at the northern part of the Yamizo Mountain Range, Central Japan.

Notes. It was most unexpected that the northernmost and highest part of the Yamizo Range should harbour an isolated species of the group of *Kurasawatrechus eriophorus*. Before the discovery of *K. yamizonis*, we assumed that the whole mountain range might be included in the territory of the *quadraticollis* group. We now know that this supposition was only partially true. As was mentioned in the introduction of this paper, it is difficult to elucidate at present why and how such a discontinuous distribution of the *eriophorus* group was established. Mt. Yamizo-san is about 78 km distant to the northeast from the northeastern edge of the hitherto known range of the *eriophorus* group, and moreover, separated from it by the wide alluvium of the

Kinu-gawa River. It is necessary to see if the range of the species-group extends further north along the western side of the alluvial plain, so as to enable us to speculate on the possibility of detour dispersal of ancestral trechines onto Yamizo-san from the northwest.

This interesting new species was found at three different sides of Mt. Yamizo-san (1,022 m in height). Shikanomata, where adequate materials including the holo- and allotypes were obtained, lies at the head of the Mumo-gawa, a tributary of the Naka-gawa River, on the western slope of the mountain. It is about 25.2 km north by east of Dônoiri, the type locality of *K. intermedius* to be described on later pages. The second collecting site, Iriyama, lies just at the northern side of the main ridge, and is about 3.1 km east by north of the Shikanomata site. The other known habitat, at the Kaburéishi-zawa, is on the southeastern slope, about 3.3 km south-southeast of Iriyama, about 4.9 km east-southeast of Shikanomata, and about 24.1 km north-northeast of Dônoiri. At the first two places, the trechine was dug out from colluvia but was considered endogean, while at the Kaburéishi-zawa, all the six known specimens were found in the upper hypogean zone about 2 m below the surface. We removed, in two days, more than 30 m^3 of soil and gravel from a scree at the side of a narrow branch stream of the Kaburéishi-zawa, and searched for the minute beetle. It was invariably found near the bed rock just like true upper hypogean trechines.

Kurasawatrechus intermedius S. UÉNO, sp. nov.

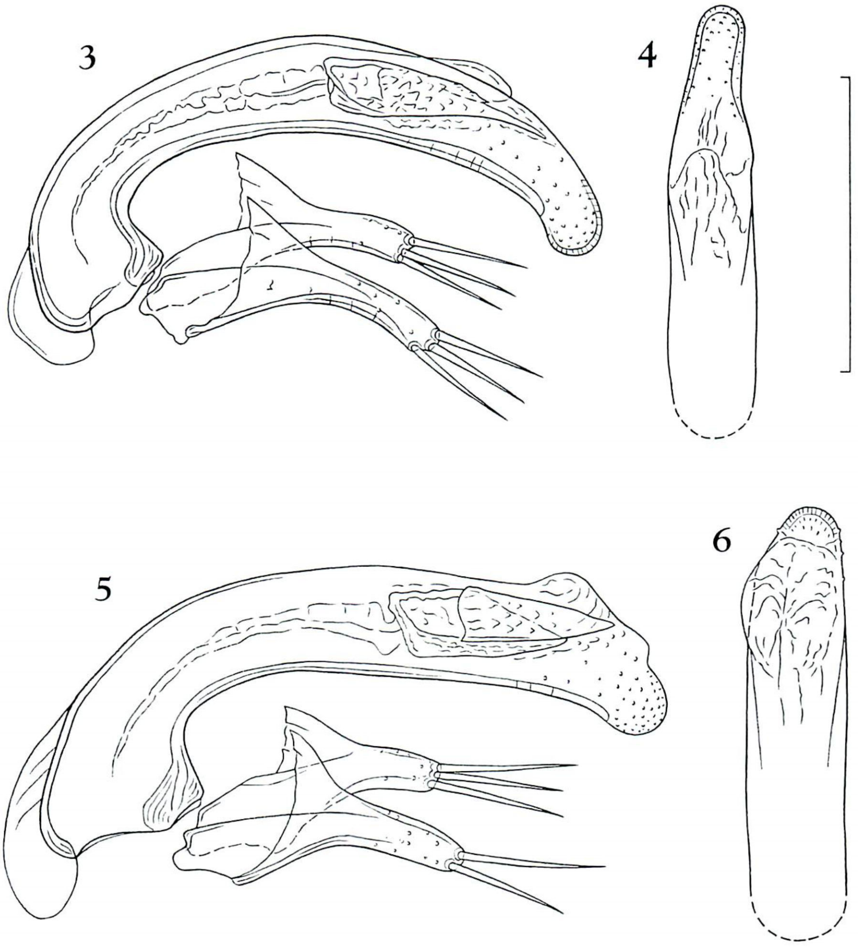
[Japanese name: Torinoko-mekura-chibigomimushi]

(Figs. 5–6)

Length: 2.80–3.05 mm (from apical margin of clypeus to apices of elytra).

Closely allied to *K. quadraticollis* S. UÉNO (1974, p. 112, figs. 7–9; 1985, p. 87, pl. 16, fig. 18), with which it agrees in many details, but readily distinguished from that species by the smaller size, narrower pronotal base, more distinctly sinuate pronotal sides, shorter and more regularly ovate elytra with narrower basal areas, and so on. From *K. ohkawai* S. UÉNO, it is discriminated by the larger head, broader pronotal apex, and differently shaped elytra. Decisively different from the two species in the configuration of male genitalia, above all in the short broad apical lobe of aedeagus.

Colour reddish brown and shiny, though more or less lighter than in *K. quadraticollis*. Head as in *K. quadraticollis*, though a little more transverse with more widely convex genae; antennae reaching basal third of elytra. Pronotum rather subcordate than subquadrate, wider than head, wider than long, widest at about seven-tenths from base, and a little more strongly narrowed towards front angles than towards ante-basal sinuation, which is at about three-tenths from base and more or less obviously deeper than in *K. quadraticollis*; PW/HW 1.35–1.39 (M 1.36), PW/PL 1.14–1.21 (M 1.18), PW/PA 1.23–1.30 (M 1.28), PW/PB 1.16–1.18 (M 1.17); disc a little more strongly convex than in *K. quadraticollis*, though similarly sculptured to the latter; sides more strongly arcuate in front and slightly divergent basad behind ante-



Figs. 3–6. Male genitalia of *Kurasawatrechus* spp.; left lateral view (3, 5), and apical part of aedeagus, dorso-apical view (4, 6). —— 3–4. *K. yamizonis* S. Uéno, sp. nov., from Shikanomata on Mt. Yamizo-san. —— 5–6. *K. intermedius* S. Uéno, sp. nov., from Dônoiri at the northwestern foot of Mt. Torinoko-san.

basal sinuation; base slightly but widely emarginate, more or less narrower than in *K. quadraticollis* though still a little wider than apex, which is either straight or very slightly arcuate, PB/PA 1.07–1.12 (M 1.10); front angles usually broader and less pointed than in *K. quadraticollis*, hind angles more or less sharp.

Elytra ovate, shorter than in *K. quadraticollis*, widest at about two-fifths from bases, and more gradually narrowed towards apices than towards bases; EW/PW 1.46–1.54 (M 1.49), EL/EW 1.42–1.44 (M 1.43); surface more strongly convex than in *K. quadraticollis*, with the apical declivity less steep; shoulders effaced, with prehumeral borders distinctly arcuate at the proximal portions; sides more evenly and a little more strongly arcuate in basal two-thirds than in *K. quadraticollis*; apices separately rounded, forming an obtuse but rather large re-entrant angle at suture; striation and pubescence on intervals as in *K. quadraticollis*.

Microsculpture and pubescence on ventral surface as in *K. quadraticollis*. Legs somewhat shorter and stouter than in *K. quadraticollis*, though structurally similar to the latter.

Male genital organ small and rather lightly sclerotized. Aedeagus nearly one-fourth as long as elytra, hardly or only very slightly arcuate except for basal part, which is abruptly bent ventrad; basal orifice small, with the sides only very slightly emarginate; sagittal aileron large though narrow and hyaline; apical lobe very short and broad, slightly curved ventrad as well as to the left, and very widely rounded at the tip in both dorsal and lateral views; ventral margin either straight or slightly emarginate at middle in profile. Copulatory pieces as in *K. ohkawai*. Styles short and stout, left style larger than the right and devoid of ventral projection, each bearing two, three or four setae at the apex.

Type series. Holotype: ♂, allotype: ♀, paratype: 1 ♂, 20–V–1988, H. OHKAWA leg. Deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

Type locality. Dônoiri, 260 m alt., at the northwestern foot of Torinoko-san, Yamata of Batô-machi in Tochigi Prefecture, Central Japan.

Notes. In many respects, this new species is intermediate between *K. quadraticollis* S. UÉNO and *K. ohkawai* S. UÉNO, and is probably closer to the former than to the latter. Its type locality is situated at the western side of the Torinokos, and is nearly 39 km distant to the west-northwest from that of *K. quadraticollis* beyond the Kuji-gawa Valley. From the type locality of *K. ohkawai*, it is about 32 km distant to the north by east beyond the Naka-gawa Valley. Thus, *K. intermedius* is isolated from its direct relatives both geographically and topographically, and the zoogeographical gap is much larger between its habitat and those of the other members of the *quadraticollis* group than between the former and those of *K. yamizonis*.

The type specimens of *K. intermedius* were found in a gully at the left side of the Yamata-gawa about 2 km northwest of the top of Torinoko-san (427 m in height). They were dug out from a colluvium, but seemed to be endogean rather than upper hypogean.

Kurasawatrechus ohkawai S. UÉNO, 1988

Kurasawatrechus ohkawai S. UÉNO, 1988, Elytra, Tokyo, **16**, p. 2, figs. 1–3; type locality: Amemaki-yama of the Keisoku Hills.

Additional specimens examined. 4 ♂♂, 1 ♀, Amemaki-yama, 290 m alt., Ohkawado, Mashiko-machi, Tochigi Pref., 29–IV–1988, H. OHKAWA leg. (NSMT); 2 ♂♂, 1 ♀, Mt. Kaba-san, 550 m alt. on NNE slope, Yasato-machi, Ibaraki Pref., 10–VIII–1988, S. UÉNO & A. SAITO leg. (NSMT).

Notes. The specimens from Mt. Kaba-san, which is 13.6 km south of Amemaki-yama, are slightly different from the topotypical ones in somewhat narrower pronotal base and the reduction of pronotal discal setae. They are, however, identical with the latter in other details including the configuration of male genitalia, and are regarded as a geographical variant of *K. ohkawai.* The standard ratios in the Kaba-san specimens (3.05–3.40 mm in the length of body) are as follows: PW/HW 1.40–1.44 (M 1.43), PW/PL 1.15–1.19 (M 1.16), PW/PA 1.35–1.37 (M 1.36), PW/PB 1.14–1.19 (M 1.17), PB/PA 1.13–1.20 (M 1.16), EW/PW 1.48–1.52 (M 1.50), EL/EW 1.40–1.42 (M 1.41).

Mt. Kaba-san (709 m in height) is a head at the northern part of the Tsukuba Hills, the southernmost block of the Yamizo Range which is separated from the Keisoku block by the courses of the Sakura-gawa and the Hinuma-gawa Rivers. However, the topographical gap between these blocks is not so definite as that between the Keisoku and the Torinoko blocks, and this is probably why differentiation of *Kurasawatrechus* has not yet attained to the species level between the two southern blocks of the Yamizo Range.

The three specimens of *K. ohkawai* known from Mt. Kaba-san were dug out from a colluvium deposited at the side of a gully in a deciduous broadleaved forest on the eastern slope of the watershed ridge. They were found in the upper hypogean zone at a depth of 60–70 cm, but the mode of their life was typically endogean, all crawling about on the under surfaces of fist-sized stones embedded in clayey parts.

摘　　要

上野俊一：八溝山地のメクラチビゴミムシ類. —— 福島県境から南へ，栃木，茨城両県の県境上を南北方向に延びて筑波山にいたる八溝山地は，総延長が 100 km を越えるが，北から八溝，鷲子，鶏足，筑波の 4 山塊に区分される. この山地からは，最近までメクラチビゴミムシ類が知られていなかったが，1987 年の秋にオオカワメクラチビゴミムシ *Kurasawatrechus ohkawai* S. Uéno が発見されたのを契機にして，急速に調査が進み，4 山塊のどれにもクラサワメクラチビゴミムシ属の地中種の生息することがわかった.

これらのメクラチビゴミムシ類は 3 種に分類されるが，北端にあって標高のもっとも高い八溝山にのみクラサワメクラチビゴミムシ群の種（ヤミゾメクラチビゴミムシ *K. yamizonis* S. Uéno）が分布し，他のみっつの山塊にはアブクマメクラチビゴミムシ群のものがひろがっている. 後者は，那珂川を境にして 2 種に分かれ，北側には新種のトリノコメクラチビゴミムシ *K. intermedius* S. Uéno が，南側の鶏足，筑波両山地にはオオカワメクラチビゴミムシがそれぞれ分布する. あまり顕著な境界のない北部の 2 山塊に，系統の異なる 2 種のメクラチビゴミムシが生息するという事実は注目に値するが，その由来は今のところはっきりしない. 将来，栃木県の北西部におけるメクラチビゴミムシ類の分布状況がもっと詳しくわかってくれば，この問題に対する解答が得られるかもしれない.

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Elytra, *Tokyo*, **16** (2): 116, November 15, 1988

新雑誌紹介

“Elytron” (Bulletin of the European Association of Coleopterology), Barcelona, Spain.

最近ヨーロッパで，新しい甲虫の専門誌があいついで刊行された．そのひとつは，Deutsch-Italienischen Coleopterologischen Gesellschaft (のちに Societas Coleopterologica と改称) によって，1985年の秋から刊行されている “Acta Coleopterologica” で，現在は第4巻にかかっている．もうひとつが，ここに紹介する “Elytron” で，スペインのバルセローナに本部をおく Asociación Europea de Coleopterologia の機関誌である．その刊行はかねてから予告されていたが，今年の初夏に第1巻が配布された (雑誌そのものには発行月日が明記されていないが，7月上旬ヴァンクーヴァーで開催された第18回国際昆虫学会議で回覧されたので，おそらく6月の刊行だろうと思われる)．メディアム・オクタヴォの変形判で，厚手のコート紙115ページのなかなか立派な雑誌になっている．

この巻に掲載されているのは，12篇の論文と，意見および追悼記事が各1篇の計14篇で，論文のうち分類に関するものが9篇 (オサムシ，ハネカクシ，コケムシ，タマムシ，シバンムシ，ゴミムシダマシ，ハムシ，カミキリムシ，ゾウムシの各科に関するもの1篇ずつ)，ホソシバンムシの生態に関するもの1篇，土壌甲虫の体重/体長比について論じたもの1篇，甲虫類における核型の多様性について論じたもの1篇と，なかなか読みごたえのある多彩な内容になっている．また，「意見」は，W. G. EBERHARD の “Sexual Selection and Animal Genitalia” の批評で，一種の書評だと考えてよい．

甲虫類に関するこのように包括的な専門誌が発足したことは誠に喜ばしく，今後いっそうの発展を祈りたい．それにつけても残念なのは，日本鞘翅目学会の国際的な知名度の低さで，こちらに先取権があるとはいえ，機関誌の名称も単複が異なるだけでシノニムに近い．国際的な交流をもっと盛んにする努力が必要だろう．

(上野俊一)

Elytra, Tokyo, **16** (2): 117–121, November 15, 1988

A New *Pterostichus* (Coleoptera, Carabidae) of the Subgenus *Melanius* from Northeastern Kwantô, Central Japan

Sumao KASAHARA

Nishifuna 4–9–13, Funabashi City, Chiba, 273 Japan

Abstract A new pterostichine carabid beetle, *Pterostichus* (*Melanius*) *tsukubasanus* sp. nov., is described from Ibaraki Prefecture, Central Japan. It is closely related to *P.* (*M.*) *ambigenus* BATES and its allies, and seems to be restricted to the Yamizo and Abukuma Mountains.

In this paper, I will describe a new pterostichine carabid beetle, belonging to the subgenus *Melanius* of the genus *Pterostichus*, based on the materials obtained on Mt. Tsukuba-san and its neighbouring mountains in Ibaraki Prefecture, Central Japan. The abbreviations used herein are the same as those explained in the foregoing papers of mine.

I wish to express my deep gratitude to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for his advice and reading the manuscript of this paper. Thanks are also due to Dr. Sadahiro OHMOMO, Mr. Shigeto YAMAYA and members of the Mito Insect Association, Ibaraki, for their kind support in materials and field works.

Pterostichus* (*Melanius*) *tsukubasanus KASAHARA, sp. nov.

[Japanese name: Tsukuba-hoso-nagagomimushi]

(Figs. 1–2, 4)

Pterostichus (*Melanius*) sp.: KASAHARA, 1986, p. 8.

Description. Length (measured from apex of labrum to apices of elytra) 10.2–11.3 mm. Width 3.6–4.1 mm. Black, shiny, elytra faintly iridescent; labrum, mandibles, antennae and femora dark reddish brown to blackish brown; palpi, tibiae and tarsi reddish brown.

Head gently convex; eyes large, well convex; tempora short, oblique; apices of labrum and clypeus gently emarginate; frontal furrows linearly impressed, though relatively shallow, divergent in posterior halves, extending to before the level of anterior supraorbital setae, sometimes vaguely punctate; surface almost smooth, though rather clearly punctate on latero-dorsal areas behind eyes in the Tsukuba-san and Hanazono-san examples, while almost impunctate in the Yamizo-san ones; antennae extending beyond shoulders of elytra, relative length of scape and segments 2–6 as follows:—

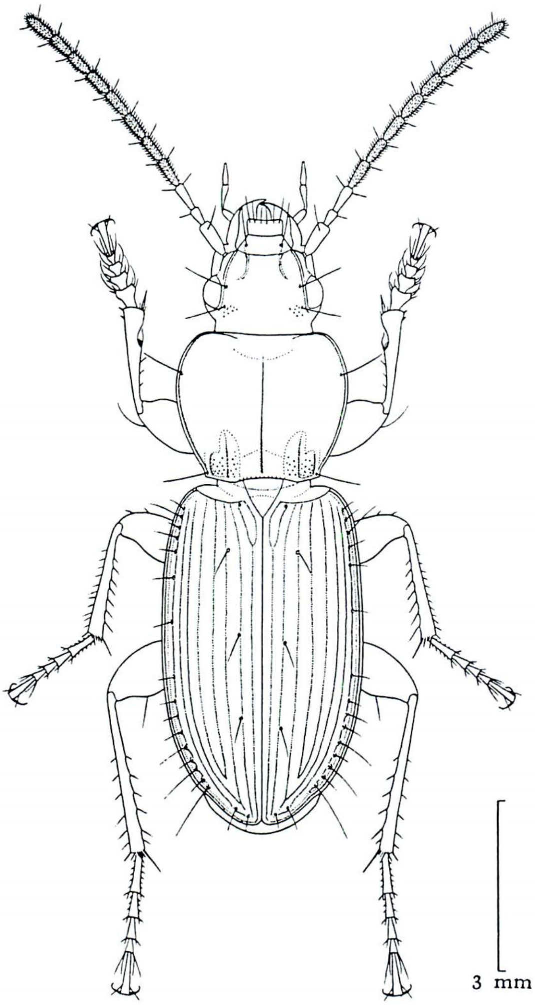
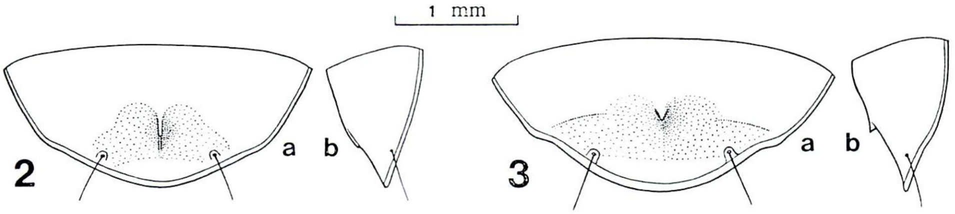


Fig. 1. *Pterostichus* (*Melanius*) *tsukubasanus* KASAHARA, sp. nov., ♂, from Mt. Tsukuba-san, Ibaraki Prefecture.

1: 0.5: 0.9: 0.9: 0.9: 0.9; segment 2 usually unisetose at apex.

Pronotum moderately convex, widest a little before the middle, ca. 1.4 times as wide as head (PW/HW 1.36–1.47, mean 1.40), as wide as base in almost the same proportion (PW/PBW 1.38–1.50, mean 1.43), ca. 1.3 times as wide as long (PW/PL 1.21–1.36, mean 1.28); lateral margins evenly well arcuate, a little more strongly convergent posteriad than anteriad, and hardly or minutely sinuate just before the basal angles, which are obtuse though distinct; lateral reflexed borders narrow, becoming more or less narrower towards apices; anterior marginal setae inserted at apical fourth; apical



Figs. 2–3. Terminal sternites in the males of *Pterostichus* (*Melanius*) spp. —— 2, *P.* (*M.*) *tsukubasanus* KASAHARA, sp. nov., from Mt. Tsukuba-san, Ibaraki Prefecture; 3, *P.* (*M.*) *ambigenus* BATES from Yunotani, Niigata Prefecture; a, ventral view; b, lateral view.

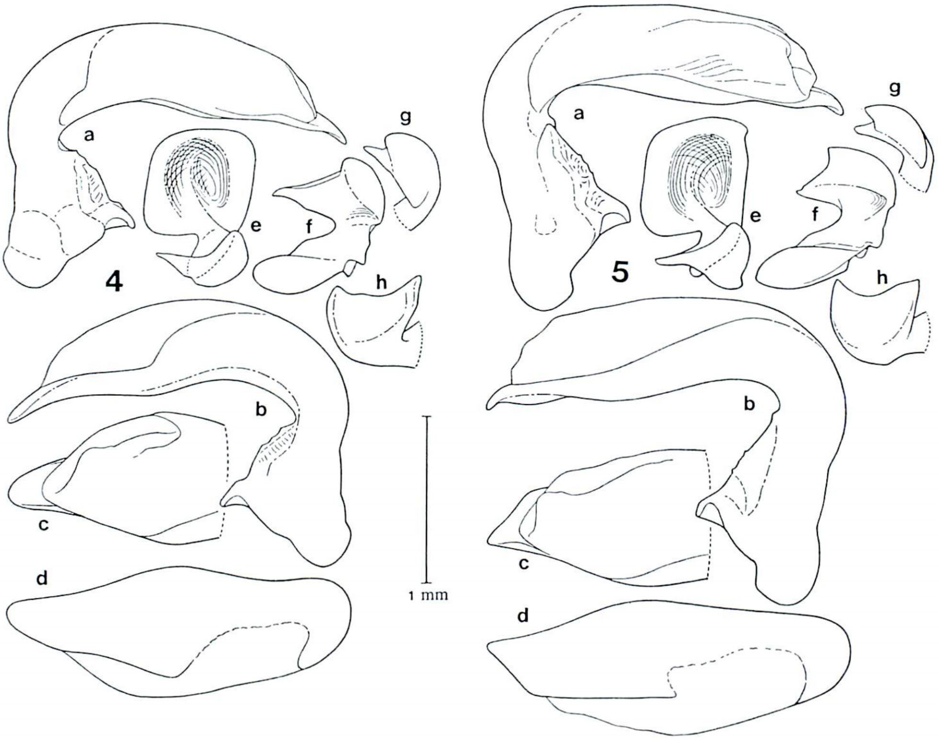
margin gently emarginate, very narrowly bordered on each lateral third, the borders becoming wider towards the middle; basal margin gently emarginate and punctate at the median part, rather oblique on each side; basal foveae deep, strongly punctate, each fovea indistinctly separated into inner large and outer small portions, the former with linear impression at the bottom; median line relatively fine and shallow, though deepening at basal part; apical crescent and basal transverse depressions obsolete. Wings reduced, about three-fifths length of elytra, and narrowing.

Elytra elongated elliptical, more or less convex, widest at about middle, ca. 1.2 times as wide as pronotum (EW/PW 1.14–1.27, mean 1.22), ca. 2.4 times as long as pronotum (EL/PL 2.30–2.66, mean 2.43), about a half as long again as wide (EL/EW 1.51–1.60, mean 1.55); basal margin gently curved, obliquely extending to shoulder, and meeting with lateral margin at an obtuse but distinct angle; shoulders rounded; lateral margins weakly arcuate from behind shoulders, and gently convergent to pre-apical emarginations, which are rather distinct, apices rounded; inner plica visible in dorsal view; scutellar striole arising from basal pores, lying on interval 2, with the extremities often adjoining stria 1; striae almost smooth; intervals rather flat on disc, interval 3 with three dorsal pores, anterior one at about basal fifth and adjoining stria 3, posterior two adjoining stria 2 and situated at about middle and apical fourth, respectively; marginal series of pores 15–16 in number.

Basal three segments of meso- and metatarsi externally sulcate. Ventral side more or less shiny; pro-, meso- and metepisterna, and lateral sides of pro- and meso-sterna distinctly punctate; sternites 3–4 ruggedly punctate, sternites 5–7 minutely or vaguely rugose and punctate on each side; prosternum furrowed at middle, the process unbordered; in the male, terminal sternite weakly depressed at the apical part, and with short longitudinal carina at the middle, the carina being longer in the Yamizo-san example than in the Tsukuba-san ones.

Aedeagus strongly bent at basal third, basal part stout, and with distinct longitudinal ridge at the middle of inner face, apical lobe as long as wide, rounded at apex; left paramere wide, square; right one stout, strongly bent at apical two-fifths, apical part widely securiform, asymmetrically emarginate at apex.

Type series. Holotype: ♂, Yubukuro, northeastern foot of Mt. Tsukuba-san,



Figs. 4–5. Male genitalia of *Pterostichus* (*Melanius*) spp. —— 4, *P.* (*M.*) *tsukubasanus* KASAHARA, sp. nov., from Mt. Tsukuba-san, Ibaraki Prefecture; 5, *P.* (*M.*) *ambigenus* BATES, from Yunotani, Niigata Prefecture; a–d, aedeagus (a, left lateral view; b, right lateral view; c, apical half in dorsal view; d, ventral view); e, left paramere; f–h, right paramere (f, right lateral view; g, apical part in right lateral view; h, apical part in dorsal view).

Ibaraki Pref., 18–V–1986, S. KASAHARA leg.; paratypes: 3 ♂♂, same data as for the holotype.

Other specimens examined. 1 ♀, Kameyachi, Mt. Hanazono-san, Ibaraki Pref., 16–IX–1984, S. KASAHARA leg.; 1 ♀, Sadanami, Kita-ibaraki-shi, Ibaraki Pref., 23–VIII–1987, S. TANI leg.; 1 ♂, 2 ♀♀, Manaita-zawa, Mt. Yamizo-san, Ibaraki Pref., 28–V–1988, S. KASAHARA leg.

The holotype is preserved in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo. The paratypes and the other specimens examined are deposited in my collection.

Notes. Five species of pterostichine carabids belonging to the subgenus *Melanius* have hitherto been known from Japan. Four of these, *nigrita* (FABRICIUS), *ambigenus* BATES, *basipunctatus* STRANEO and *chujoiellus* JEDLIČKA, are mutually related to one another in having common characteristics in male genitalia, especially the peculiar right paramere.

The present new species is doubtless a close relative of them. It closely resembles *basipunctatus* in general appearance, especially in the punctate head, but is clearly distinguished from the latter by larger body and differently shaped male genitalia. It is also allied to *ambigenus*, but can easily be discriminated from that species by the differences in the form of elytral apices, as well as in the configuration of the terminal sternite and of the aedeagus, the apical lobe of which is rather pointed in the latter, but distinctly rounded in the former. Judging from the conformation of male genitalia, *chujoiellus* seems to be the closest relative of the present new species. However, it has so peculiarly formed elytral apices, that it can be readily distinguished not only from the present new species but also from the other relatives.

All the examples of the present new species were obtained in marshy places and at the sides of mountain streams, like the other hygrophilous pterostichines of the subgenus *Melanius*. It seems to localize on the Yamizo and Abukuma Mountains.

摘　　要

笠原須磨生: 関東地方北東部産ホソナガゴミムシの1新種. —— 関東地方北東部の茨城県筑波山から, ナガゴミムシ属 *Pterostichus* のホソナガゴミムシ亜属 *Melanius* に属する1新種, ツクバホソナガゴミムシ *P.* (*M.*) *tsukubasanus* を記載した. 本種は, 日本産ホソナガゴミムシ亜属のうち, 北海道に産するエゾホソナガゴミムシ *P.* (*M.*) *nigrita* や, 本州の山地に生息するクロホソナガゴミムシ *P.* (*M.*) *ambigenus* などの4種に近縁で, それらとは, 翅端や雄の腹板末節, および交尾器の形態的特徴により明らかに区別される. 茨城県北端部の八溝山と花園山で得られた個体には, 軽微な地域変異が認められるが, これらも同種とみなした. 本種の分布域は, これまでのところ, 八溝, 阿武隈の両山地に限られるようである. 生態的にみたホソナガゴミムシ亜属の種は, 好湿性が強く, 本種も湿地や渓畔のきわめて湿潤なところで得られている.

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Elytra, *Tokyo*, **16** (2): 122, November 15, 1988

福島県のゴミムシ類2種について

笠原須磨生

Sumao Kasahara: On Two Carabid Beetles from Fukushima Prefecture, Northeast Japan

クロズアカチビゴモクムシ *Acupalpus* (*Setacupalpus*) *hilaris* Tschitschérine 1♀，福島県東白川郡塙町　真名畑林道，27–V–1988，筆者採集．

路傍の水溜りの縁で，草の根ぎわから出てきたものを採集した．本種の基産地は東シベリアで，日本では，北海道と宮城県から初めて報告され (Habu, 1981)，ほかに栃木県塩原の記録 (笠原，1981) があるにすぎない．原色日本甲虫図鑑，**2** (p. 149, pl. 27) に図示解説されているように，色彩の顕著な種であるが，分布が局地的で個体数が少なく，体が小さいこともあって，発見の機会がまれなのかもしれない．関東平野周辺が分布の南限となる寒地性のゴミムシのひとつであろう．

アリスアトキリゴミムシ *Lachnoderma asperum* Bates

1♂，4♀♀，福島県双葉郡広野町　浅見川渓谷，13–VIII–1988，筆者・江橋芳英採集．

旅館の屋上に設置したライトトラップに飛来した．当夜は，ほかにも数頭が得られている．暖地性のよく知られた種であるが，いわゆる珍種に属し，一度に多数を見ることはほとんどない．和名のアリスは「蟻巣」の意で，好蟻性を想わせるが，生態については不明な点が多く，土中に潜入して成虫越冬をすること，春夏の候は石下に見られること，本例のように灯火に誘引されること，などが知られているくらいである．蟻の巣に侵入して幼虫や蛹を食う (戸澤，1943) という嗜好習性については，いまだに確証がなく，疑問視されている (Habu, 1967)．

ちなみに，本種の基産地は，神奈川県箱根の宮ノ下で，記載にもちいられた標本は，Bates (1883) の記述によると "One example under a stone; another, partly eaten, in an ant's nest; May 3rd, 1880." ということである．1880 年，初夏の箱根を訪ねた Lewis が採集したのは，石下の1頭のほかに，蟻の巣のなかに見いだされた一部を食われたもの（おそらく死骸）であった．どうやら蟻を食うどころか，食われた死骸の出所が和名の由来，と解釈したほうがよさそうである．

末尾ながら戸澤論文のご教示を頂いた，名古屋女子大学の佐藤正孝教授，ならびに東京農業大学の渡辺泰明助教授に厚くお礼申しあげる．

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Elytra, Tokyo, **16** (2): 123–125, November 15, 1988

A New Species of the Dytiscid Genus *Copelatus* (Coleoptera) from Japan

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Abstract A new species of the genus *Copelatus* is described from the vicinities of Tokyo, Central Japan. It is named *C. hasegawai* M. SATÔ, sp. nov.

In 1980, I reviewed the Japanese species of the dytiscid genus *Copelatus*. After its publication, I received many specimens of a remarkable species of the genus through the courtesy of Mr. HASEGAWA. They were collected in a small pool on the right bank of the Arakawa River, in Toda City near Tokyo. According to my careful study, it has become apparent that the beetle is a new species somewhat similar to *C. caffer* BALFOUR-BROWNE in general appearance. In the present paper, I am going to describe it under the name of *C. hasegawai*.

I am grateful to Dr. Shun-Ichi UÉNO for his critical reading of the original manuscript and to Messrs. Michiaki HASEGAWA, Terutsune ABE and Seiji MORITA for their kind support of the material.

Copelatus hasegawai M. SATÔ, sp. nov.

(Figs. 1–4)

Male. Body elongate-oval, somewhat convex, shining, brown to dark brown; antennae, legs, base and two longitudinal vittae of each elytron yellowish brown.

Head provided with a row of punctures along each eye and with a short series of punctures on the anterolateral sides of eyes; disc finely and sparsely punctate and microreticulate in the integument. Pronotum about 2.6 times as broad as long, lateral sides gently narrowed anteriad; disc obsoletely and sparsely punctate, the punctures being much finer than those on head, provided with a mediolongitudinal furrow and a transverse series of punctures along the anterior margin, and scattered with a group of distinct longitudinal punctures on each side along the posterior margin and in lateral areas; integument microreticulate. Elytra about 1.6 times as long as broad, subparallel-sided in basal two-thirds, thence narrowed posteriad; each elytron with 7 striae and a submarginal stria, the striae starting almost at the base and attaining to near apex, excepting the 1st one which extends to apical third; two longitudinal vittae situated on 3rd and 7th to lateral intervals, and contiguous with each other at the apices; disc finely and sparsely punctate, and microreticulate in the integument, the punctures being

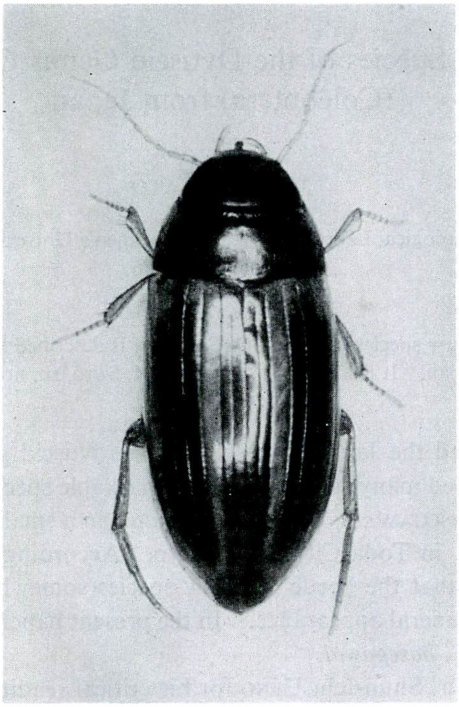


Fig. 1. *Copelatus hasegawai* M. SATÔ, sp. nov., from Dôman in Toda City.

almost the same as those on head.

Ventral surface shining and microreticulate. Lateral sides of metacoxal wings and metacoxae striolated. Median lobe of male genitalia rather broad, arcuate and gently sinuate apicad in dorsal view, with pointed apex.

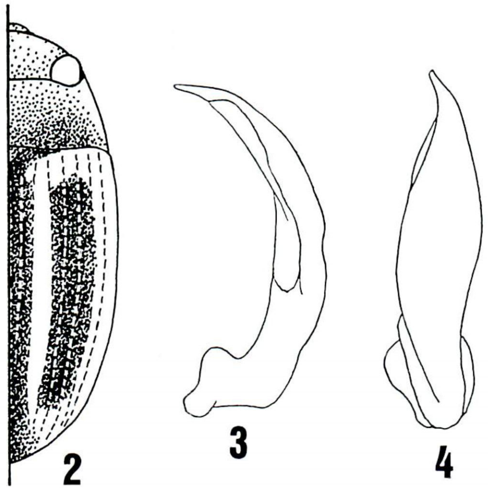
Female. No pronounced sexual dimorphism, with the exception of pro- and mesotarsi which are incrassate.

Length: 3.9–4.6 mm; breadth: 1.7–2.1 mm.

Holotype: ♂, Dôman, on the bank of Arakawa River, Toda City, Saitama Pref., 1. IX. 1985, M. HASEGAWA leg. Allo- (♀) and paratypes: 15 ♂♂, 13 ♀♀, same data as for the holotype; 3 ♂♂, 2 ♀♀, same locality as for the holotype, 29. VI. 1985, M. HASEGAWA leg.; 5 ♂♂, 2 ♀♀, same locality as for the holotype, 16. XI. 1985, S. MORITA leg.; 46 exs., same locality as for the holotype, 15. VII. 1986, T. ABE leg.

The holo-, allo- and some paratypes are preserved in the collecton of the National Science Museum (Nat. Hist.), Tokyo. Other paratypes are preserved in the collections of the following institutes and entomologists: Biological Laboratory, Nagoya Women's University; Entomological Laboratory, Ehime University; Naturhitorisches Museum Basel; Department of Entomology, Smithsonian Institution; Toda Municipal Native Museum; T. ABE and S. MORITA.

The present new species belongs to the Group 11 of the genus *Copelatus*, though



Figs, 2–4. *Copelatus hasegawai* M. SATÔ, sp. nov. —— 2, Right half of body; 3, median lobe of male genitalia in lateral aspect; 4, median lobe of male genitalia in dorsal aspect.

not related to any species hitherto known in the group because of its peculiar vittae. In general appearance, it is more or less similar to *C. caffer* BALFOUR-BROWNE, 1939, from South Africa, but the latter belongs to a different species-group (Group 10), which has 6 striae and 1 submarginal stria on the elytra. The Group 11 of the genus *Copelatus* is recorded for the first time from Japan.

摘　要

佐藤正孝：日本産セスジゲンゴロウ属の1新種. —— セスジゲンゴロウ属には，これまでに日本から11種が知られていた．最近，東京近郊の戸田市（荒川）で，上翅に4本の黄色縦紋をもつ美しい種が長谷川道明氏によって採集され，新種であることが判明したので，ここに記載した．なお，セスジゲンゴロウ属は，上翅の条線の状態によって14群に分けられているが，上記の種は第11群に含まれるもので，日本からは初めての記録である．

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Elytra, Tokyo, **16** (2): 126, November 15, 1988

Notes on *Ilybius* (Coleoptera, Dytiscidae) from Japan and her Neighbourhood

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Through the courtesy of Dr. Y. KUROSAWA and Dr. S.-I. UÉNO, we had an opportunity to re-examine the type specimen of *Ilybius chishimanus* KÔNO preserved in the collection of the National Science Museum (Nat. Hist.), Tokyo. After a careful study, we concluded that *I. chishimanus* is identical with *I. crassus* THOMSON.

On the other hand, we re-examined the *Ilybius* species from Hokkaido which was recorded as *I. chishimanus*. We have found that it is not *I. chishimanus* but a composite of two different species. One of them was identified with *I. poppiusi* ZAITSEV after a careful comparison of the specimens from Hokkaido with Siberian ones, while the other might be a new species. This is the first record of the former species to the Japanese fauna.

We are grateful to Dr. Yoshihiko KUROSAWA, Dr. Shun-Ichi UÉNO and Mr. Hideaki MATSUMOTO for their kindness extended to us in many ways.

Ilybius crassus THOMSON, 1856

Ilybius crassus THOMSON, 1856, K. Svenska Vet.-Ak. Handl., **1854** (12): 224.
Ilybius chishimanus KÔNO, 1944, Chishima Gakujutsu-chôsa-kenkyû-tai Hôkokusho, **1**: 80. *Syn. nov.*

Specimen examined. 1 ♀ (Holotype), Suribachi-Wan, Is. Paramusir, Kuril Islands, 30. VI. 1941, H. KÔNO & S. SUMIMIYA leg.

Distribution. C. & N. Europe, Siberia, Kuril Is.

Ilybius poppiusi ZAITSEV, 1906

Ilybius poppiusi ZAITSEV, 1906, Rev. russe Ent., **6**: 208.

Japanese specimens examined. 2 ♂♂, 2 ♀♀, Lake Abashiri-ko, Memanbetsu, Hokkaido, 3. VIII, 6. IX. 1986, H. MATSUMOTO leg.; 1 ♂, Kaya-numa, Kushiro, Hokkaido, 22, 24. VI. 1967, I. HIURA leg.; 1 ♀, Betsuho, Kushiro, Hokkaido, 28. VII. 1987, R. YAKITA leg.

Distribution. Mongolia, Siberia, Japan (Hokkaido).

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Elytra, Tokyo, **16** (2): 127–132, November 15, 1988

Tenebrionidae of East Asia

(IV) A New Genus Related to *Trichamarygmus* (Amarygmini) and Two New Species from Northwest Thailand

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Abstract A new genus related to *Trichamarygmus* (Amarygmini) is erected for two new Northwest Thai species, *Bunamarygmus thailandicus* gen. et sp. nov. and *B. hirasawai* sp. nov.

In a collection of a large number of tenebrionid specimens made in Northwest Thailand, I found a strange species belonging to the tribe Amarygmini. I have been unable to determine its systematic position for a long time, even the genus to which it belongs. I considered that this unknown species might be a member of the genus *Trichamarygmus*, which was erected by Carter (1913) for a species from western Australia, but I was unable to confirm it at that time.

When I visited the British Museum (Natural History) in 1987, I had an opportunity to examine the type species of *Trichamarygmus*, and concluded that the unknown species is not only new to science but belongs to a new genus. Recently, when I examined the specimens collected by Mr. Hanmei Hirasawa at a locality very near to that of the first new species, I found a second species of the same genus to be described in this paper.

I wish to express my sincere gratitude to Mr. Les Jessop, British Museum (Nat. Hist.), London, who permitted me to examine the type specimens, and to Dr. S.-I. Uéno, National Science Museum (Nat. Hist.), Tokyo, who constantly gives invaluable advice for me. I am also indebted to Messrs. H. Akiyama, H. Hirasawa, M. Sawai, T. Shimomura, S. Tsuyuki and M. Tao for their contribution of the materials. Special thanks are due to Mr. K. Sakai, who kindly took photographs for this paper.

The holotypes of the new species are preserved in the collection of the National Science Museum (Nat. Hist.), Tokyo.

The generic name, *Bunamarygmus*, is composed of *Bun* and *Amarygmus*. "Bun" is derived from Thai, meaning a hairy insect.

Genus *Bunamarygmus* gen. nov.

Type species: *Bunamarygmus thailandicus* sp. nov.

Body rather small to medium-sized (7–11.5 mm), oblong oval and strongly convex above and winged; dorsal surface clothed with noticeably long erect hairs, ventral surface densely covered with rather short appressed hairs.

Head nearly vertical against prothorax; fronto-clypeal border grooved; clypeus short; genae gently oblique and slightly convex; eyes fairly large. Antennae nearly filiform, though gently dilated towards apices.

Pronotum transverse; apical margin finely bordered; base obtusely produced and not bordered; sides subparallel in basal portion, then rounded towards apex, with lateral margins finely bordered and hardly visible from above; disc strongly convex, steeply inclined in front and at the sides, scattered with strong, ocellate punctures, each bearing a long erect hair at its centre, weakly, longitudinally depressed in apical 1/3, distinctly and longitudinally foveolate at the postero-lateral parts before hind angles. Scutellum triangular.

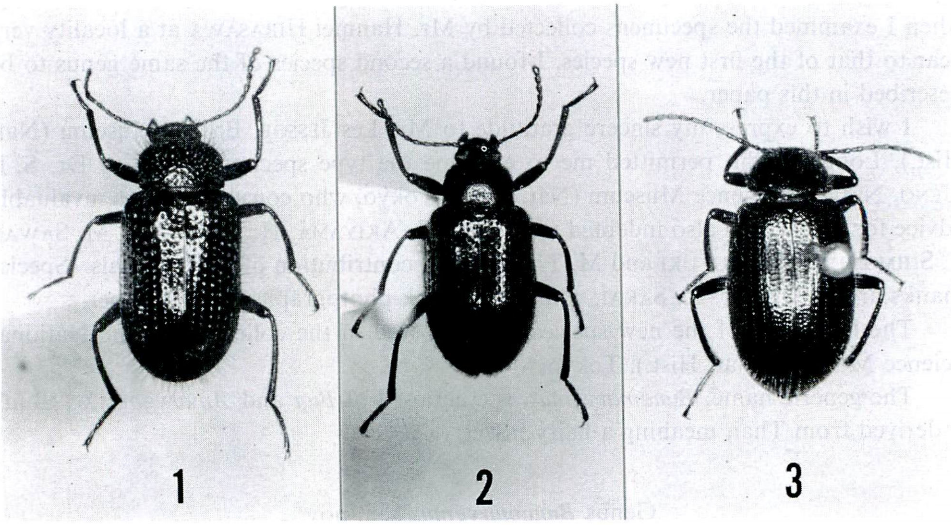
Elytra subparallel-sided, evidently wider than pronotum at the bases which are distinctly crenulate; dorsum strongly convex; disc with rows of large, deep punctures; intervals almost flat and impunctate, though bearing long erect hairs in rows; lateral margins finely bordered, invisible from above; epipleura entire.

Prosternum fairly short, with prosternal process bluntly produced; mesosternum short, strongly depressed anteriorly, triangularly declivous at the middle; metasternum medium-sized, with a median impression posteriorly. Abdomen medium-sized.

Legs rather slender; claws falciform.

Male genitalia elongated fusiform.

Notes. As mentioned in the introduction, this new genus superficially resembles



Figs. 1–3. —— 1. *Bunamarygmus thailandicus* gen. et sp. nov., ♂ (holotype). —— 2. *B. hirasawai* sp. nov. ♂ (holotype). —— 3. *Trichamarygmus pilosus* CARTER, 1913, from western Australia (British Museum (Nat. Hist.), London).

the genus *Trichamarygmus* CARTER, 1913, from western Australia, but can easily be distinguished from the latter by the following characteristics:

1) The pronotum and elytra are subparallel-sided and the former is evidently narrower than the latter.

2) The pronotum is steeply inclined in front and at the sides.

3) The postero-lateral parts of pronotum are remarkably foveolate before the hind angles.

4) The bases of elytra are crenulate.

5) The prosternum is wider in front.

6) The mesosternum is less strongly produced forwards medially.

Bunamarygmus thailandicus sp. nov.

(Figs. 1, 4–6)

Black, with mouth parts, gula and claws brown; dorsal surface strongly shining, ventral surface gently so, the former bearing long erect hairs, the latter clothed with dense, short and appressed hairs. Oblong-oval, and strongly convex above.

Head transverse elliptic, feebly convex forwards, coarsely punctate and haired; clypeus short, transversely convex; fronto-clypeal border shortly grooved; genae gently oblique and slightly convex; eyes large, somewhat comma-shaped in dorsal view, distance between them about 0.8 times their own diameter; interocular space sparsely punctate, the punctures large and deep. Mentum triangular with briefly truncate base, coriaceous and finely pubescent, raised antero-medially; gula triangular, alutaceous, depressed posteriorly, impressed along lateral borders; terminal segment of maxillary palpus strongly dilated with arcuate apex. Antennae nearly filiform though feebly thickened towards apex, ratio of the length of each segment from basal to apical: 0.3, 0.2, 0.5, 0.3, 0.3, 0.3, 0.3, 0.3, 0.25, 0.25, 0.3.

Pronotum transverse, 1.5 times as wide as long, widest at the middle; apical margin nearly straight in dorsal view and arcuate in frontal view, finely bordered; base feebly bisinuous, roundly emarginate opposite to scutellum, and moderately oblique on each side; sides subparallel in basal 3/5, then rounded towards apex, steeply declined to lateral margins, which are finely bordered and hardly visible from above; front angles obtuse and blunt at corners; hind angles obtuse though denticulate at corners; disc strongly convex, steeply inclined apicad and laterad, strongly, ocellately punctate, each puncture bearing a long erect hair at the centre, weakly depressed longitudinally in apical 1/3, sharply and longitudinally foveolate at the postero-lateral parts before hind angles. Scutellum triangular with rounded sides, sparsely scattered with microscopic punctures.

Elytra a little less than 1.6 times as long as wide, 3.4 times length and a little more than 1.4 times width of pronotum, widest at the middle; dorsum strongly convex, thickest slightly before the middle, feebly depressed behind scutellum, with sutural portion weakly ridged in middle; disc with rows of large, deep punctures, which become smaller towards apices; intervals almost flat, bearing long erect hairs in rows; sides steeply declined to lateral margins, which are finely bordered and invisible from above.

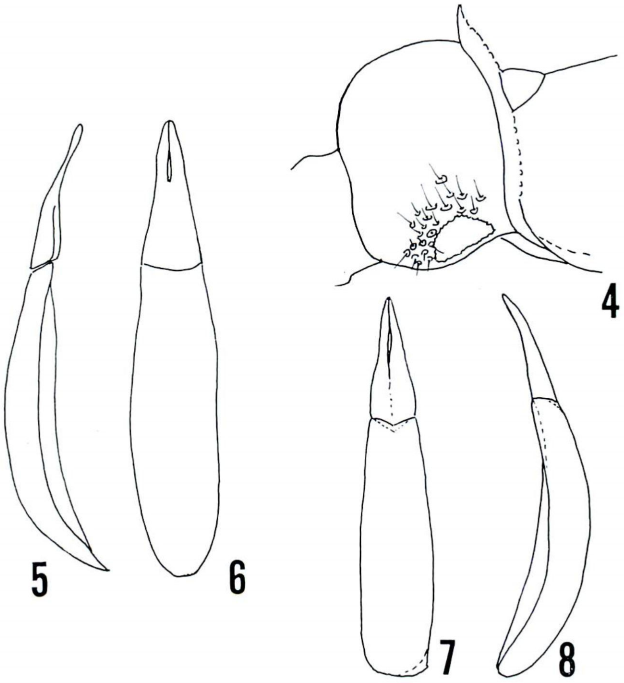
Prosternum fairly short, coarsely rugoso-punctate and pubescent, strongly raised between coxae and longitudinally, shallowly grooved in the middle, apical margin widely emarginate and feebly indented medially, rather noticeably reflexed; prosternal process somewhat rhombic and depressed; mesosternum short and rugose, strongly depressed anteriorly, triangularly declivous in the middle; metasternum medium-sized, scattered with small punctures, shallowly rugose and pubescent, with a median impression in posterior 4/5. Abdomen medium-sized, closely, rather rugosely punctate and densely haired.

Legs rather slender, closely punctate and shortly haired; ratio of the length of pro-, meso- and metatarsomeres **from** basal to apical: 0.3, 0.25, 0.25, 0.25, 1.2; 0.5, 0.3, 0.3, 0.3, 1.2; 0.8, 0.4, 0.4, 1.2, respectively; claws falciform and sharp.

Male genitalia elongate fusiform as illustrated.

Body length: 9.0–11.5 mm.

Holotype. ♂, Doi Suthep, Chiang Mai, Northwest Thailand, 21. V. 1985, M.



Figs. 4–8. —— 4–6. *Bunamarygmus thailandicus* gen. et sp. nov.; 4, pronotum and anterior portion of elytra in latero-dorsal view; 5–6, male genitalia: 5, same (dorsal view); 6, same (lateral view). —— 7–8. *B. hirasawai* sp. nov.; 7, male genitalia (dorsal view); 8, same (lateral view).

TAO leg. Paratypes: 1 ex., Meo Vil., Chiang Mai, 28. IV. 1980, S. TSUYUKI leg.; 1 ex., Doi Suthep, 19. V. 1982, T. SHIMOMURA leg.; 1 ex., Doi Suthep, 3. V. 1984, H. AKIYAMA leg.; 1 ex., Phuping Palace, Chiang Mai, 21. V. 1985, M. SAWAI leg.; 3 exs., Doi Suthep, 3. V. 1985, M. TAO leg.

Bunamarygmus hirasawai sp. nov.

(Figs. 2, 7–8)

This new species resembles the preceding, but can be distinguished from the latter by the following characteristics:

Body smaller (ca. 7 mm), dorsal surface clothed with pily hairs; head a little more transverse; genae neither strongly dilated nor strongly raised; eyes more rounded laterally, distance between them about 1.3 times their own diameter. Mentum semicircular. Antennae with ratio of the length of each segment from basal to apical: 0.4, 0.2, 0.5, 0.3, 0.35, 0.3, 0.35, 0.3, 0.3, 0.3, 0.5.

Pronotum slightly less transverse, 1.48 times as wide as long, widest at base; apical margin feebly arcuate; sides gently convergent in basal 2/3 though feebly sinuous in dorsal view, then rounded towards apex, with finely bordered lateral margins gently enveloping body and invisible from above; front angles subrectangular; hind angles obtuse but denticulate at corners; disc moderately closely and rather evenly punctate, the punctures about 1/4 times those of the preceding species in size, lacking in medial longitudinal depression. Scutellum pentagonal and hairless.

Elytra 1.56 times as long as wide, 3.5 times length and 1.5 times width of pronotum, widest at basal 3/7; dorsum strongly convex though the sutural portion is rather noticeably depressed in basal 2/3; disc with rows of deep punctures, which are rather elongate; intervals almost flat, bearing pily hairs in rows.

Prosternum longitudinally ridged medially in front, then shallowly grooved in middle, apical margin obtusely triangular, prosternal process narrowly linguiform with basal portion bilobed. Abdomen less closely punctate.

Legs with ratio of the length of pro-, meso- and metatarsomeres from basal to apical: 0.35, 0.3, 0.3, 0.25, 1.2; 0.5, 0.3, 0.3, 0.3, 1.25; 0.75, 0.35, 0.3, 1.3.

Male genitalia as in Figs. 7–8.

Holotype. ♂, Doi Pui, Chiang Mai, Northwest Thailand, 3. VI. 1986, H. HIRASAWA leg. Paratypes. 2 exs., same data as for holotype.

摘　要

益本仁雄：東アジアのゴミムシダマシ科．(IV) 北西タイで採集された *Trichamarygmus* 属 (Amarygmini) に近縁の1新属2新種．——西オーストラリア産 *Trichamarygmus* 属（1属1種が知られている）に近縁の新属と，それに含まれる2新種を，北西タイより記載し，それぞれ *Bunamarygmus thailandicus* MASUMOTO および *B. hirasawai* MASUMOTO と命名した．

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対馬新記録のベニボタル科２種

佐藤正孝

Masataka Satô: Two New Records of Lycid Beetles from Is. Tsushima, Japan

対馬のベニボタル科甲虫については，白水・宮田 (1976) のまとめにより3属5種が記録されている．先般，愛媛大学に所蔵されている対馬産のホタル類を調べたところ，つぎのベニボタル科2種は同島から未記録であることがわかったので，ここに記録しておきたい．

ヒメベニボタル *Lyponia delicatula* (Kiesenwetter, 1874)

1♂, Sago (佐護), 16. V. 1978, S. Hisamatsu leg.; 1♀, Mt. Ariake (有明山), 12. V. 1978, S. Hisamatsu leg.

分布：本州，四国，九州，対馬．

メダカヒシベニボタル *Dictyoptera oculata* (Gorham, 1883)

1♂, 1♀, Mt. Ariake, 12. V. 1978, S. Hisamatsu leg.

分布：北海道，本州，四国，九州，対馬．東シベリア．

標本を検する機会を与えられた久松定成氏に厚くお礼を申し上げる．

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Elytra, Tokyo, **16** (2): 133–136, November 15, 1988

ミヤマアカコメツキの形態について

大平仁夫

Notes on the Morphological Structure of *Ampedus alticola* (Coleoptera, Elateridae) from Japan

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Okazaki, 444 Japan

Abstract *Ampedus alticola* Silfverberg, 1977, was originally described from Nikko, Honshu, by G. Lewis in 1894 under the name of *Elater montanus* (Annls. Mag. nat. Hist., (6), **13**: 36). Some important structure of the rare species is examined by SEM-images as shown in Fig. 1 to facilitate its recognition.

ミヤマアカコメツキ *Ampedus alticola* Silfverberg, 1977 は，原記載など古い記録では *Elater montanus* Lewis または *Ampedus montanus* (Lewis) という学名で呼ばれていた，G. Lewis (1894) によって記載された種であるが，その後 Silfverberg (1977) の研究によって，*montanus* の種小名は Scopoli (1763) によって先取されていることが判明したので，同氏により上記のように改められたものである．

本種は，Miwa (1934) のモノグラフに G. Lewis 採集 (Chiuzenji, 20. VIII. 1881) の個体 (図は Nikko 産になっている) が示されたのち，主として本州中部以北の山岳地で若干の分布記録があり，図示されたものもある．しかし，その大部分は誤同定らしく，実体を正確に示したものはほとんどないように思われる．

最近になって，大平 (1973) により基準標本の検討がなされ，その実体が明らかになったが，本州には本種の類似種がほかにも分布するので，同定は簡単ではない．筆者は本種の形態について少し詳しく調査することができたので，ここにその概要を報告したいと思う．

本文を草するにあたり，標本について支援をいただいた東京都の鈴木 亙博士，北海道の佐々木恵一氏に心からお礼を申し上げる．

分布について

本種は山地性の種で，主として本州の中部山岳地帯から関東山岳地帯以北の本州，北海道にかけて分布しているようであるが，どこでも個体数は少ない．近畿地方では，平松 (1977) による和歌山県の護摩ノ壇山 (1♂, 26. V. 1974) からの記録があるが，付図から推察すると，この個体は触角の第3節が細長く，別種であるように判断される．

生態についてはなにも判明していないが，幼虫は山林の朽ち木中に生息する褐色の針金虫で，老熟

した個体はそこで蛹になり，羽化した新成虫はその場所にとどまって冬を越すものと思われる．これは，寒地系の *Ampedus* 属の種に共通した現象である．

成虫の形態

雄の体長は 9 mm 内外で，上翅が赤褐色をした本属の種のうちでは比較的小形である．体はやや細長くて両側は平行状，背面は膨隆する．体表面は光沢を有し，体毛は黒色，前胸背板は青色の光彩を欠く．頭部，小顎肢，触角，前胸部，小盾板，上翅前縁部，体下面，肢（付節は暗褐色）などは黒色である．上翅は赤褐色であるが，翅端部は通常，黒褐色を呈する．

頭部の複眼間は弱く膨隆し，前頭部は扁平状で，前頭横隆線の中央部は多少とも鈍く角ばる (Fig. 1 H)．触角は細長く，前胸背板の後角より末端 1.5 節ほど後方へ伸長する．第 2 節は短小で球形状，第 3 節は第 2 節よりやや長くて倒円錐形状，第 2–3 節を合わせたものは第 4 節とほぼ等長である (Fig. 1 E–F)．第 4 節は第 5 節とほぼ等長，第 4 節から強く鋸歯状を呈する．

前胸背板は幅と長さがほぼ等しく，背面からみた両側は後半部平行状，中央部より前方に漸次細まる (Fig. 1 B)．背面は膨隆し，表面は平滑，点刻は小形，まばらでいちように印刻される (Fig. 1 D)．前胸腹板突起は，前肢基節窩を越えてから弱く内方へ湾曲して伸長，末端近くで直角状に印刻される (Fig. 1 G)．

小盾板は幅より長く，扁平で舌状である．上翅の条線は明瞭，小形で深い点刻を規則的にそなえる．間室部は弱く膨隆し，小点刻をいちように分布し，不規則な横しわ状を呈するが，しわは顕著ではない．腰板はよく発達，内方部は幅広く，両側は平行状，外縁は途中で鈍く角ばり（↑印），そこから直線状に外方に細まる (Fig. 1 C)．

雄交尾器の形態（背面）は図示したようで，中央突起は細長く，末端は細まってとがる（末端は下方に湾曲しているため，図では末端が示されていない）(Fig. 1 J–K)．側突起の末端部は正三角形で，外縁は弱く内方へ湾曲，外角部は細まって突出し，数個の不規則な段刻を有する (Fig. 1 L–M)．

雌は雄に比してやや大形（体長 10 mm 内外）．触角はより短かく，末端が前胸背板の後角に達しない．また，触角の第 3 節は，雄のものに比してやや細長く，第 2–3 節を合わせたものは第 4 節よりやや長い (Fig. 1 A)．内部生殖器の交尾嚢 (bursa copulatrix) の袋内にある刺状毛の一部は図示したようで，各刺状毛は細長く，総数 80 本内外を列生する．

あとがき

本種は，G. LEWIS (1894) が原記載で明らかにしているように，肢や触角などが黒色～黒褐色，触角の第 3 節が短小で倒円錐形状をしていること，翅端部が黒色をしていることなど，近似種との識別は比較的容易にできるように思われる．その他，前胸背板の外形や表面の点刻の分布などにも特徴がみられる．

筆者が判断したところでは，本種は本州の山岳地帯から北海道にかけて分布する稀少種であり，現在までになされている分布記録についても再検討が必要だと思われる．

なお，ここに図示した標本は，北海道の旭川市嵐山で，佐々木恵一氏によって採集（1986 年 4 月）された ♂♀ 個体である．

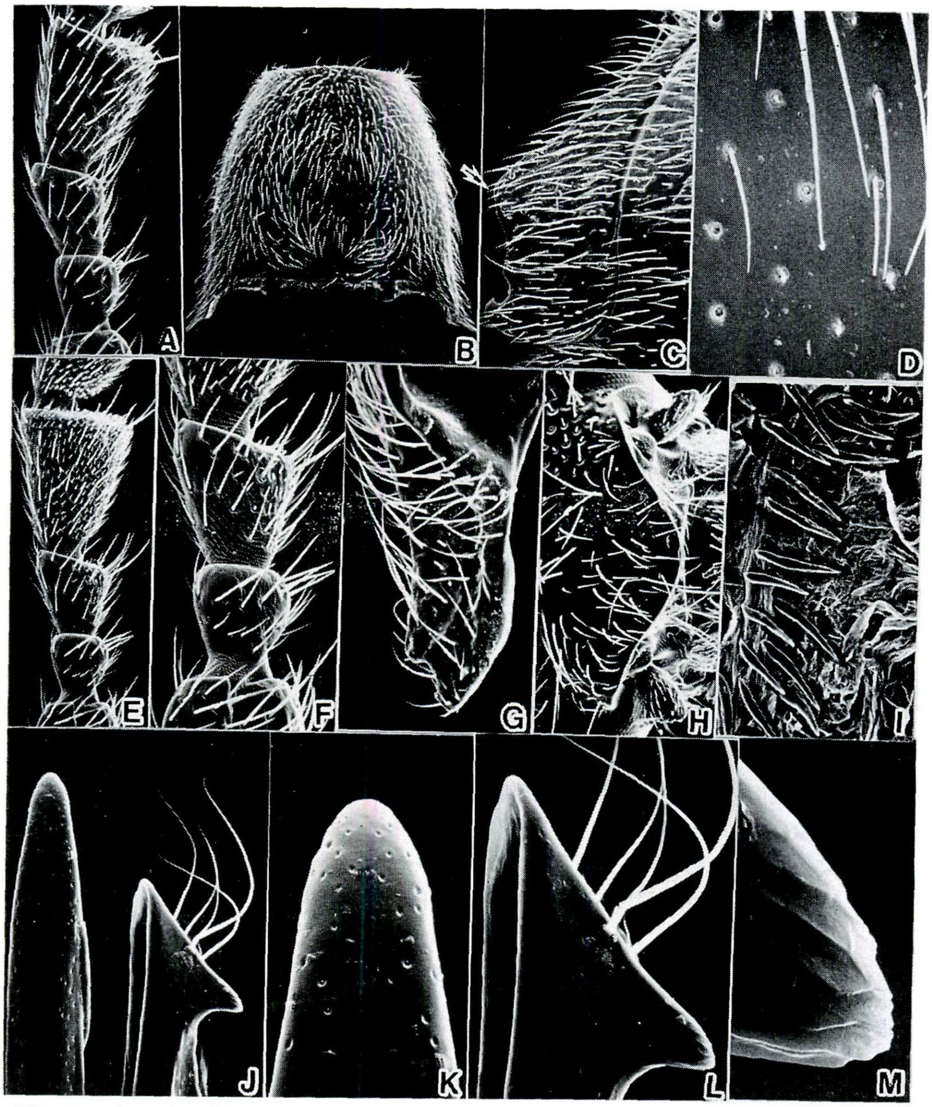

Fig. 1. *Ampedus alticola* SILFVERBERG, 1977, male (except for A and I which are females), Asahikawa City, Hokkaido.——A, 2nd to 4th segments of antenna; B, pronotum in dorsal aspect; C, basal plate; D, some punctures on the disc of pronotum; E, 2nd to 4th segments of antenna; F, 2nd and 3rd segments of antenna, enlarged; G, prosternal process in lateral aspect; H, clypeal margin; I, some spine-like setae in bursa copulatrix; J, male genitalia in dorsal aspect; K, same, median lobe; L, same, apical portion of lateral lobe; M, same, apical outer angle of lateral lobe.

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Elytra, Tokyo, **16** (2): 136, November 15, 1988

ヘリアカゴミムシダマシを九州で採集

佐藤正孝

Masataka SATÔ: Record of *Eutochia lateralis* (BOHEMAN) (Coleoptera) from Kyushu, Japan

ヘリアカゴミムシダマシ *Eutochia lateralis* (BOHEMAN, 1858) は，上翅側縁が幅広く暗赤色となる顕著な種で，東南アジアから台湾，琉球列島を経て屋久島までの記録がある．本土からの正確な記録は見当たらないようであるが，先年，鹿児島県のウナギ池を訪れた際，池畔の砂浜で石下から本種を採集することができたので，ここに記録しておきたい．

2 exs., Unagi-ike (ウナギ池), Kagoshima Pref. (鹿児島県), 18. V. 1986, M. SATÔ leg.

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Elytra, *Tokyo*, **16** (2): 137–138, November 15, 1988

クリストフコトラカミキリの異常型

遠山雅夫

An Antennal Aberrancy of *Plagionotus christophi* (Cerambycidae)

Masao Tôyama

4–16, Koshien 6, Nishinomiya, Hyogo, 663 Japan

Abstract An antennal aberrancy of *Plagionotus christophi* (Kraatz, 1879) (Coleoptera, Cerambycidae) is recorded with an opinion on the antennal segmentation.

筆者 (1984) は以前，甲虫類に現われた付属肢異常を解析し，触角と脚の相同部位，およびこれらの先端部分について，分節の生じる順序の仮説を提案した．今回，これに関連した異常型が発見されたので記録しておく．

クリストフコトラカミキリ *Plagionotus christophi* (Kraatz, 1879) (図 1)

♂, 長野県戸隠山, VI. 1983, 八木正道採集.

左右両方の触角に対称的に現われた分節異常．両触角の第 5, 第 7 両節が不完全ながら過剰分節を生じかけている．

筆者 (1984) は，一般的な 11 節の触角をもつ甲虫において，図 2 に示されるような脚と触角との相

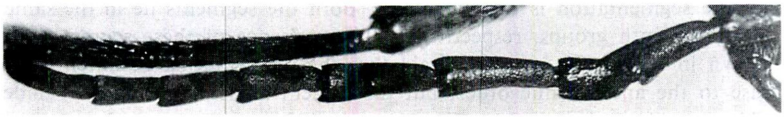

図 1. クリストフコトラカミキリ異常型の右触角先端部.

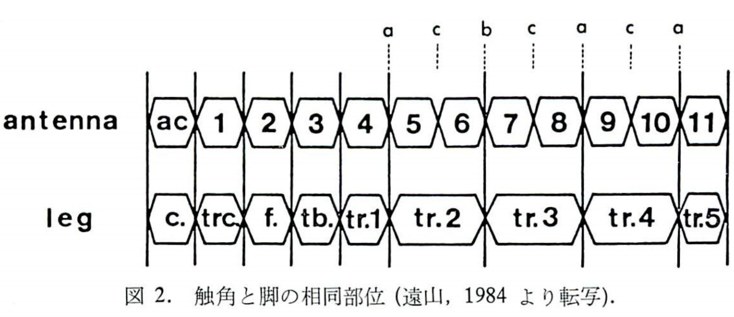

図 2. 触角と脚の相同部位 (遠山, 1984 より転写).

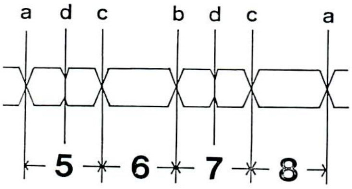

図 3. クリストフコトラカミキリ異常型において生じたと考えられる分節順序 (a→b→c→d と分節がおこったと考える).

同関係を提案し，さらにこれらの先端部分について，分節が (a)→(b)→(c) という順に生じると推定した．これに従えば，触角の (第 5 節＋第 6 節) と (第 7 節＋第 8 節) の 2 つのグループは，たがいに兄弟グループともいえる関係にあると考えられる．今回の異常型は，この 2 つのグループのなかで，同じ位置にある第 5, 第 7 両節に同じ分節異常が生じたものである．これは前述の (a)→(b)→(c) という分節に，さらに (d) という分節が生じたものと考えられる (図 3). もし分節が基部から順に生じていくものであれば，このような過剰分節が生じる場合には先端部に現われたはずである．すなわち第 11 節が過剰に分節しているはずで，第 5, 第 7 節で過剰分節を生じた今回のような異常型の説明はできない．

最後にこの貴重な異常型を採集され，これが重要な意味をもつものであると見抜かれたうえで，筆者に調査を委ねられた八木正道氏に，心よりお礼を申し上げる．

Summary

An antennal aberrancy of *Plagionotus christophi* (KRAATZ, 1879) described in this paper agrees well with the hypothesis on the homology between the antenna and leg in the Coleoptera (TÔYAMA, 1984). The basic idea of this hypothesis is shown in Fig. 2, in which the segmentation is indicated alphabetically. According to this hypothesis, the antennal segments (incl. antennal cavity) are divided into nine groups, and the sixth and seventh groups constitute a sister group. In the present aberrancy, the fifth and seventh antennal segments are split, though the segmentation is not complete. Both the segments lie in the same positions as the sixth and seventh groups, respectively. The sequence of these segmentations is estimated as shown in Fig. 3. It is usually said that the segmentation of antennae takes place from the base to the apex in due order, but the present aberrancy cannot be understood by this way. The hypothesis proposed by the author in 1984 may be strongly supported by the existence of this aberrancy.

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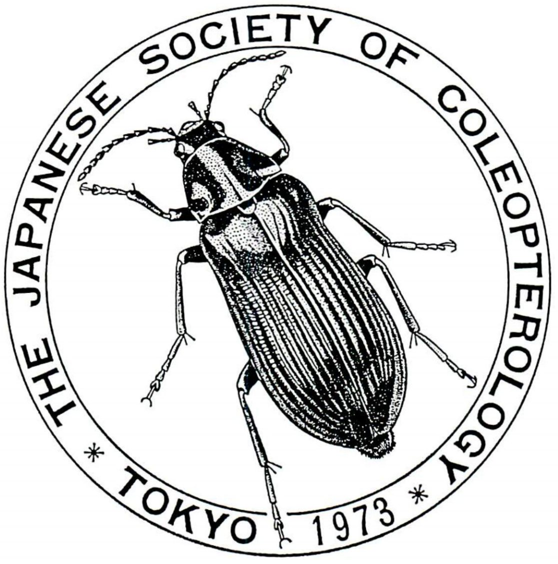
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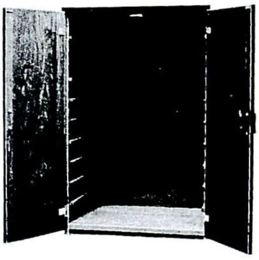

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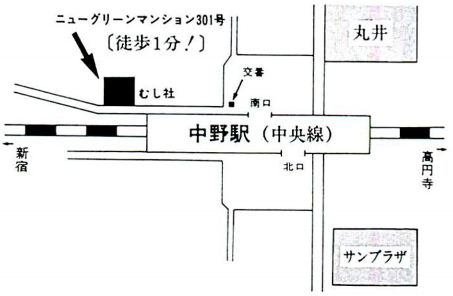

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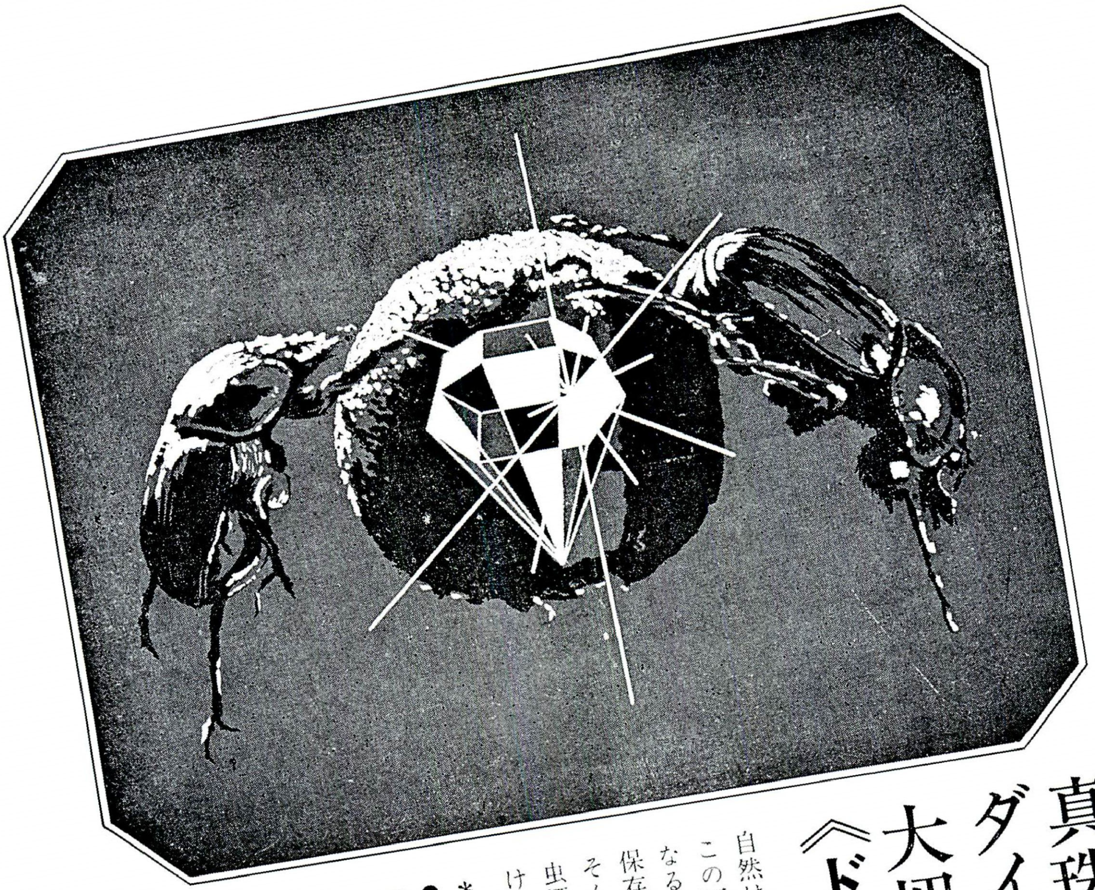

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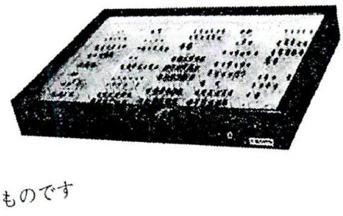

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